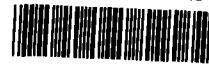


L091055807/Kankakee Co.
Henkel Corporation
ILD 005215769

EPA Region 5 Records Ctr.



352345

REF ID: A55555
JUL 31 1991
Pre-Remedial

CERCLA
Environmental Priorities Initiative
Preliminary Assessment
Report



**Illinois Environmental
Protection Agency**
P.O. Box 19276,
Springfield, IL 62794-9276

Confidential Material May be Enclosed

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APPENDICES

A	Illinois Location Map	A-1
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Location

Henkel Corporation, is located about 1/2 mile south-southwest of the city limits of Kankakee in Kankakee County, IL. The facility address is P.O. Box 191, So. Kensington Road, Kankakee, IL 60901. Henkel Corporation's facility and surrounding land occupies 193.35 acres in the NW1/4 of Section 18, Township 30 N, Range 13 W.

The facility is located in an area which is both agricultural and industrial/commercial. Henkel Corporation is bound on the north by Kankakee Garden Farms and the Yonke Estate, on the east by So. Kensington Road and the Illinois Central Gulf R.R., beyond which is the A.O. Smith Corporation and another company, on the south by Dow Chemical and more of the Yonke Estate (farm ground), and on the west by still more farm ground. So. Kensington Road provides access to Henkel Corporation and its neighbors east of the R.R. A.O. Smith Road will access the facility from the east via Route 52/45. The closest residence with a private well is approximately one quarter mile southwest of the Henkel Corporation plant.

Current Operations

The Henkel Corporation Kankakee plant is a manufacturer and distributor of specialty chemicals. The chemicals are produced from naturally occurring raw materials and are used by a wide variety of industries. The facility employs approximately 398 people.

The Kankakee plant produces dimer acids, polyamide resins, fatty nitrogen compounds, vitamin E, sterols, and starch based compounds. The polyamide resins are produced by combining a dimer or monomer fatty acid with either a functional or polyfunctional amine to form an amide. The polyamide products are sold to industries that formulate inks, coatings, paints and adhesives. The fatty nitrogens are produced either from nitriles or primary amines. Most of these products are liquids and as such, are shipped via drum or tank truck for use in cosmetics, corrosion inhibitors, in oil well drilling and with other applications. The mineral chemicals are normally amines produced from fatty alcohols. These products are used primarily by food and mining industries for the purpose of extraction. All of these products are liquid and as such are shipped in drums and tank trucks. The fine chemicals consist of two main products, vitamin E and sterols are produced from waste distillate from the vegetable oil industry.

The plant complex consists of numerous above ground tanks and many buildings. The south half of the complex is their industrial chemicals portion producing the resins and adhesives while the north half produces the fine chemicals

such as natural source vitamin E and food additives. The plant utilizes approximately 50 of the 193.35 acres owned by Henkel Corporation, the remaining acreage is leased for farming.

History

The plant began operations on October 1, 1948 as General Mills Chemicals. On September 1, 1977, the plant was purchased by Henkel Corporation. Most of the operations at Henkel Corporation have evolved from operations conducted while General Mills Chemicals owned the plant. It can be deducted from the attached aerial photographs that waste handling procedures have dramatically changed over the years of operation. The 1963 photo shows the entire west end of the facility being used as a landfill and/or lagoon.

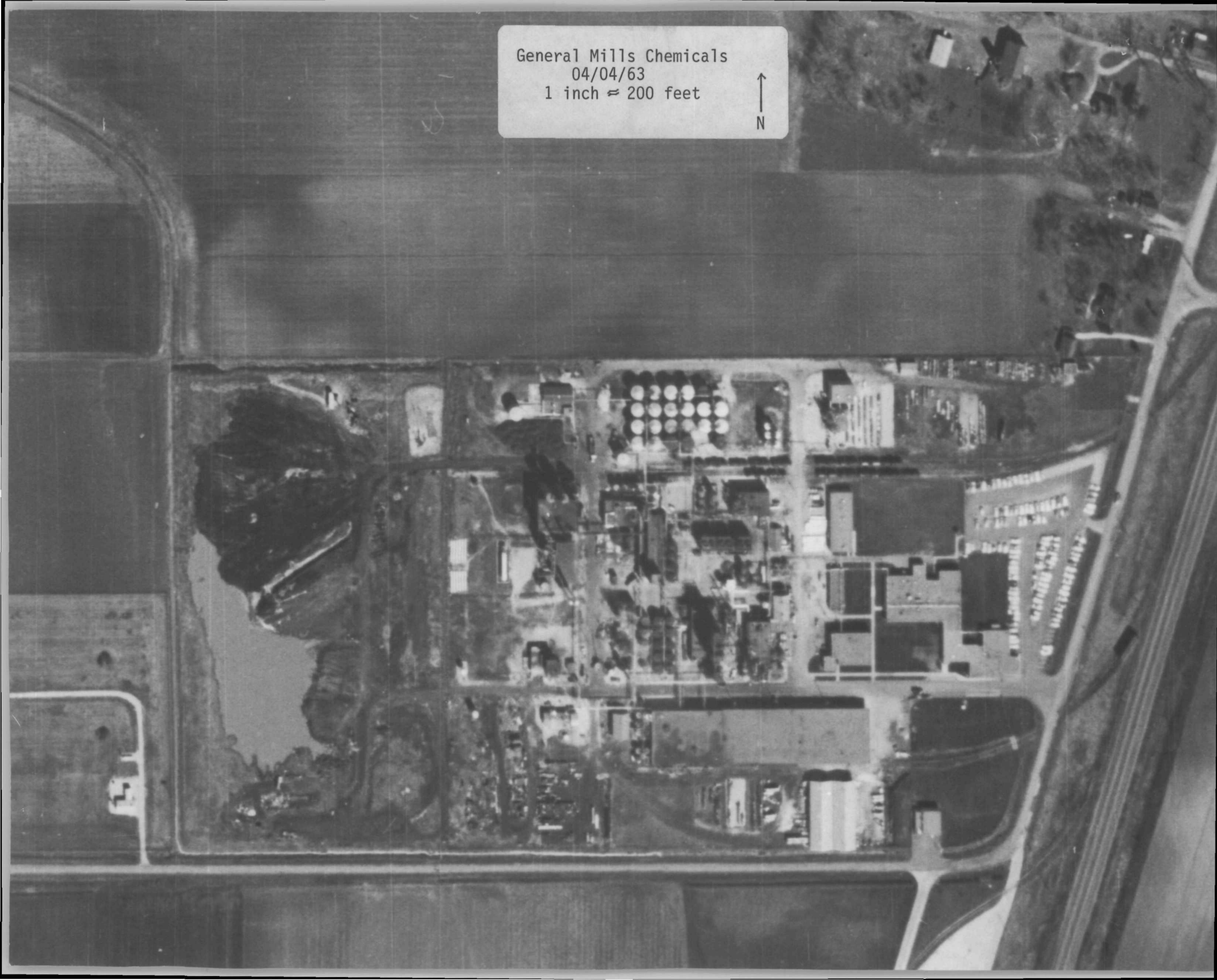
Permitting Status/Hazardous Materials

Henkel Corporation filed their RCRA Part A on November 18, 1980 which included a 335,175 gallon container storage area (S01), a 698,300 tank storage area (S02), a 1.5 MGD waste water pretreatment plant (T04), and a 129,600 GPD thermal treatment unit (T04). The latter T04 consisting of two process/heating steam boilers used to burn waste oil with natural gas. The estimated annual quantity of waste was reported as 59,410 pounds of U-listed wastes, 168,837,050 pounds of D-listed wastes and 204,600 pounds of F-listed wastes.

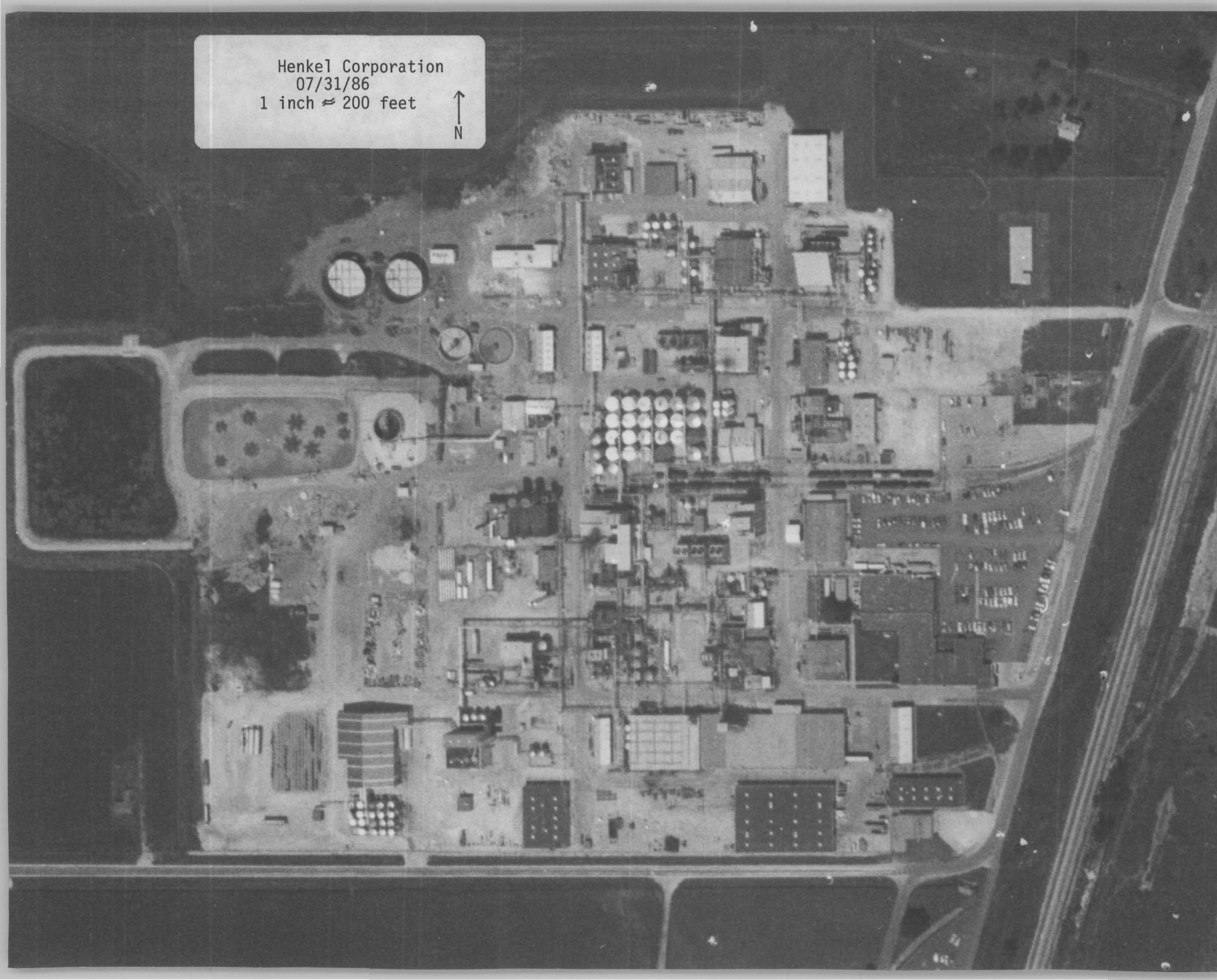
Henkel Corporation submitted their RCRA Part B permit application May 27, 1983. IEPA issued several NOD's with the final permit due April 15, 1991.

General Mills Chemicals
04/04/63
1 inch \approx 200 feet

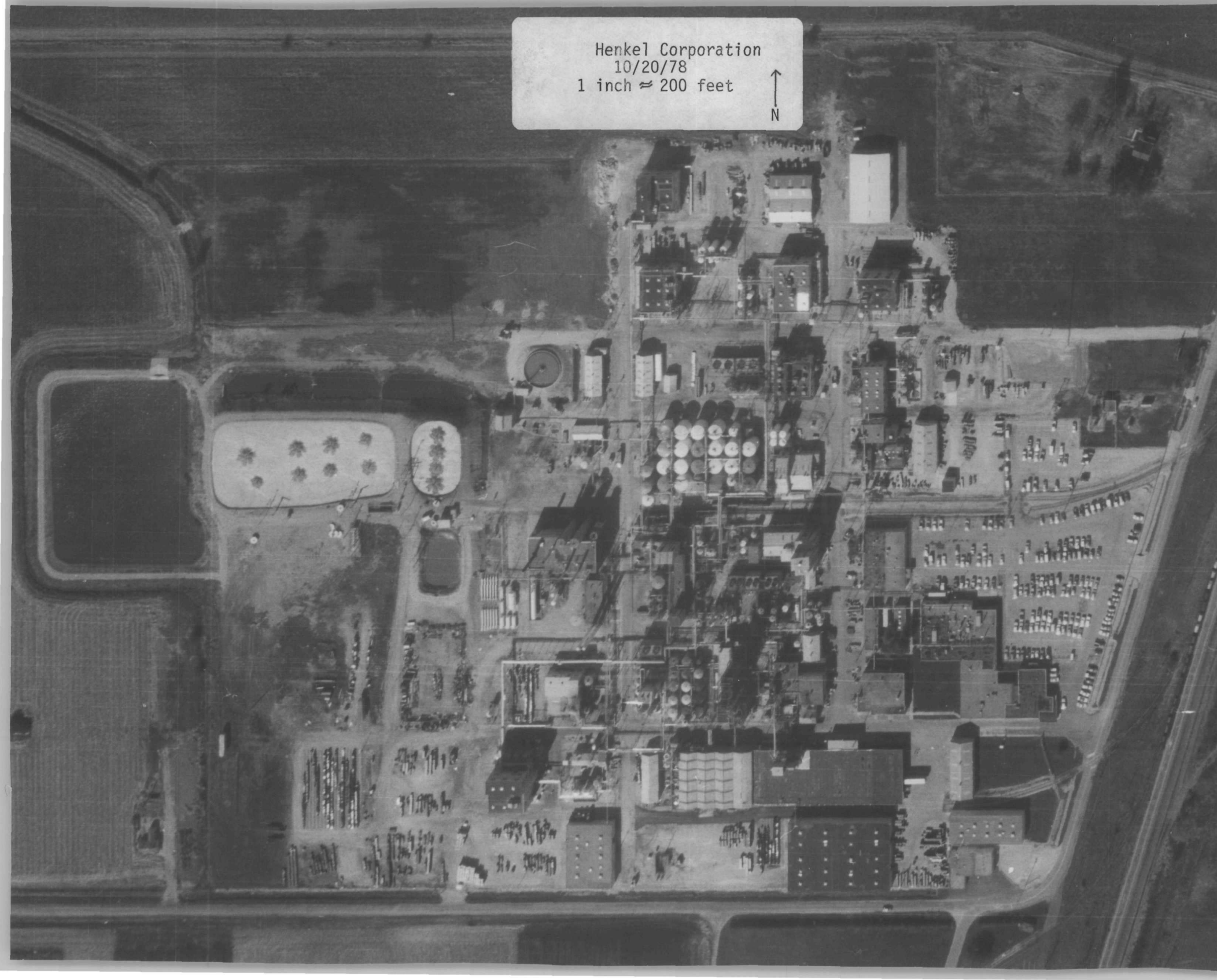
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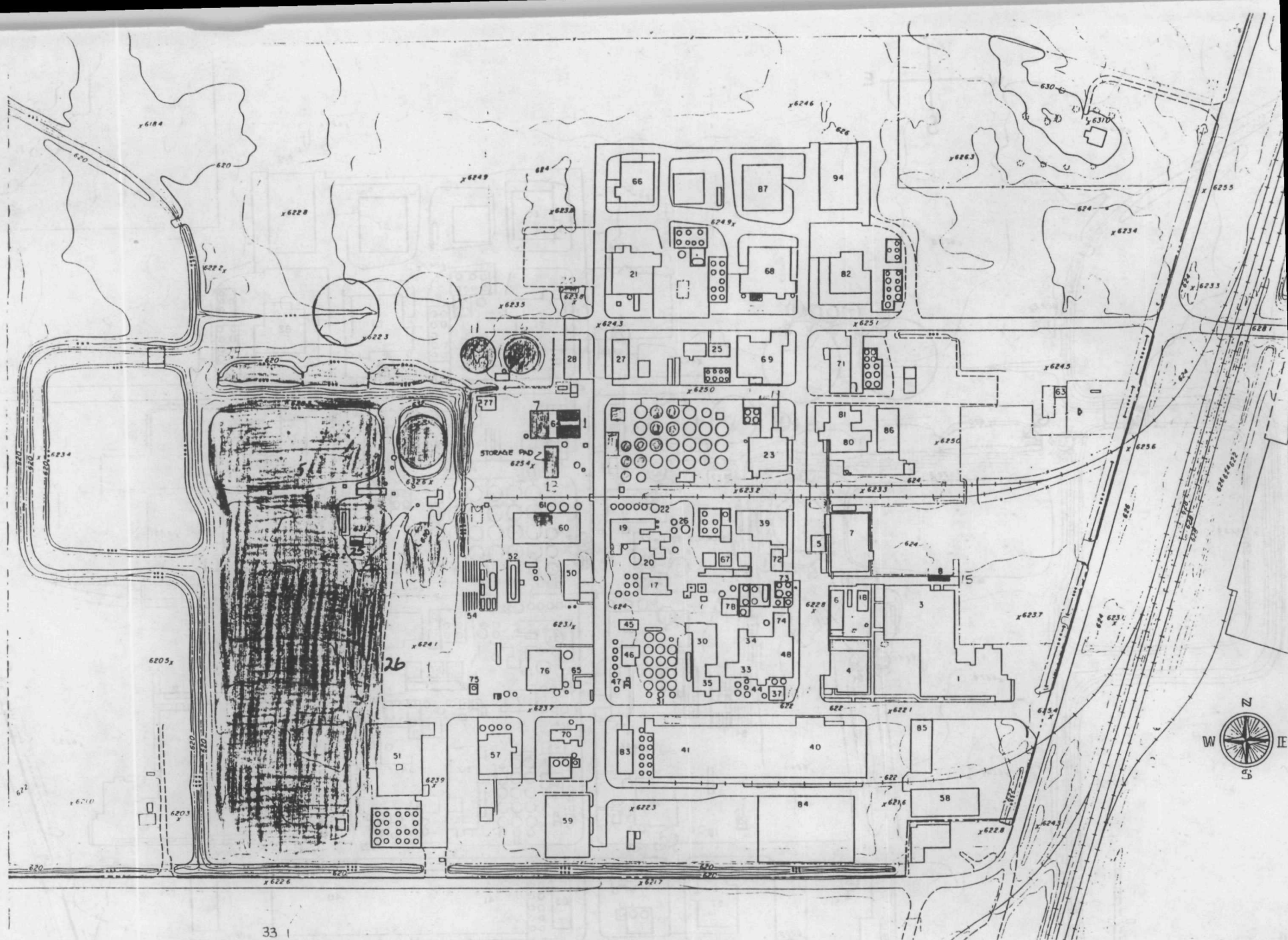


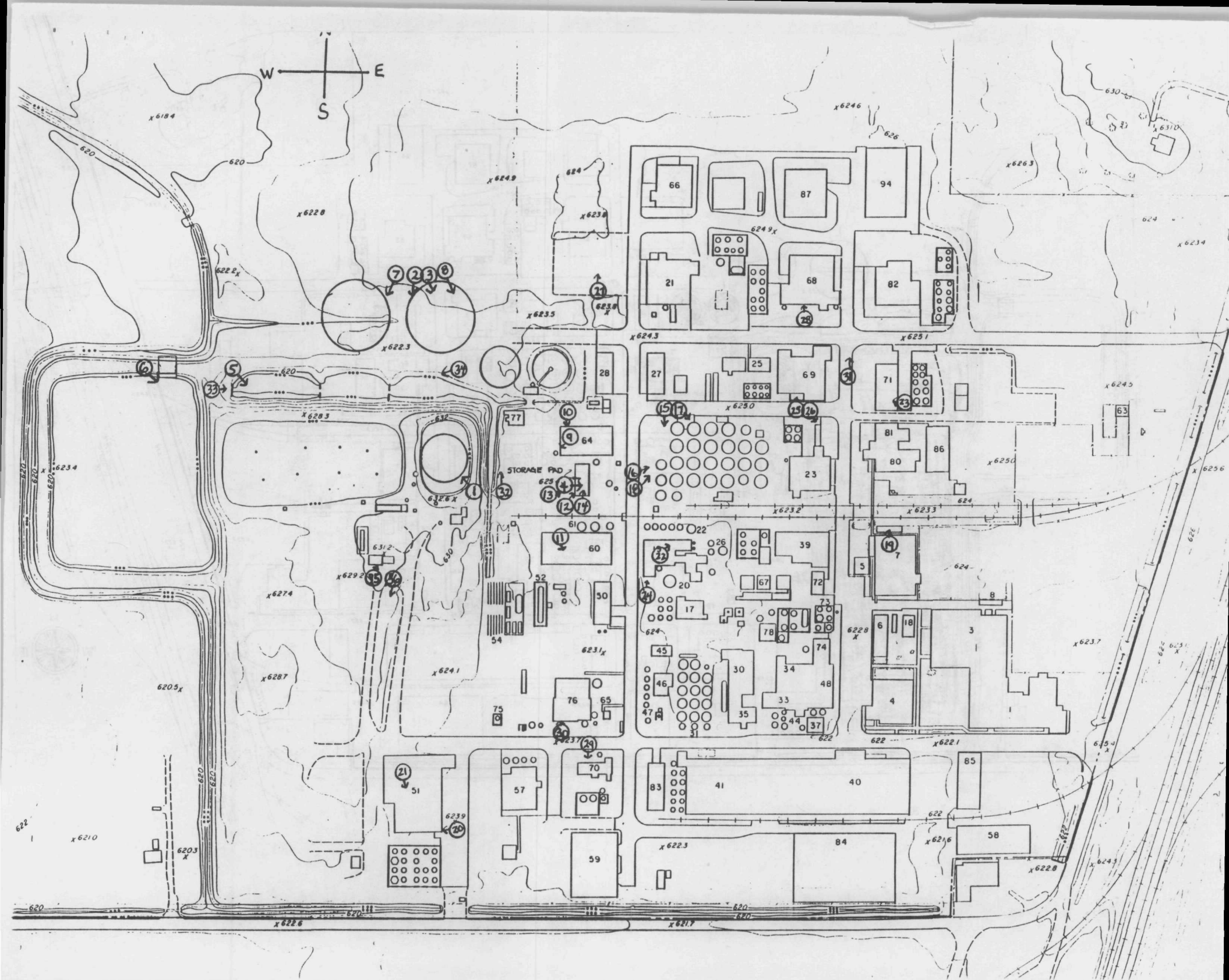
Henkel Corporation
07/31/86
1 inch \approx 200 feet

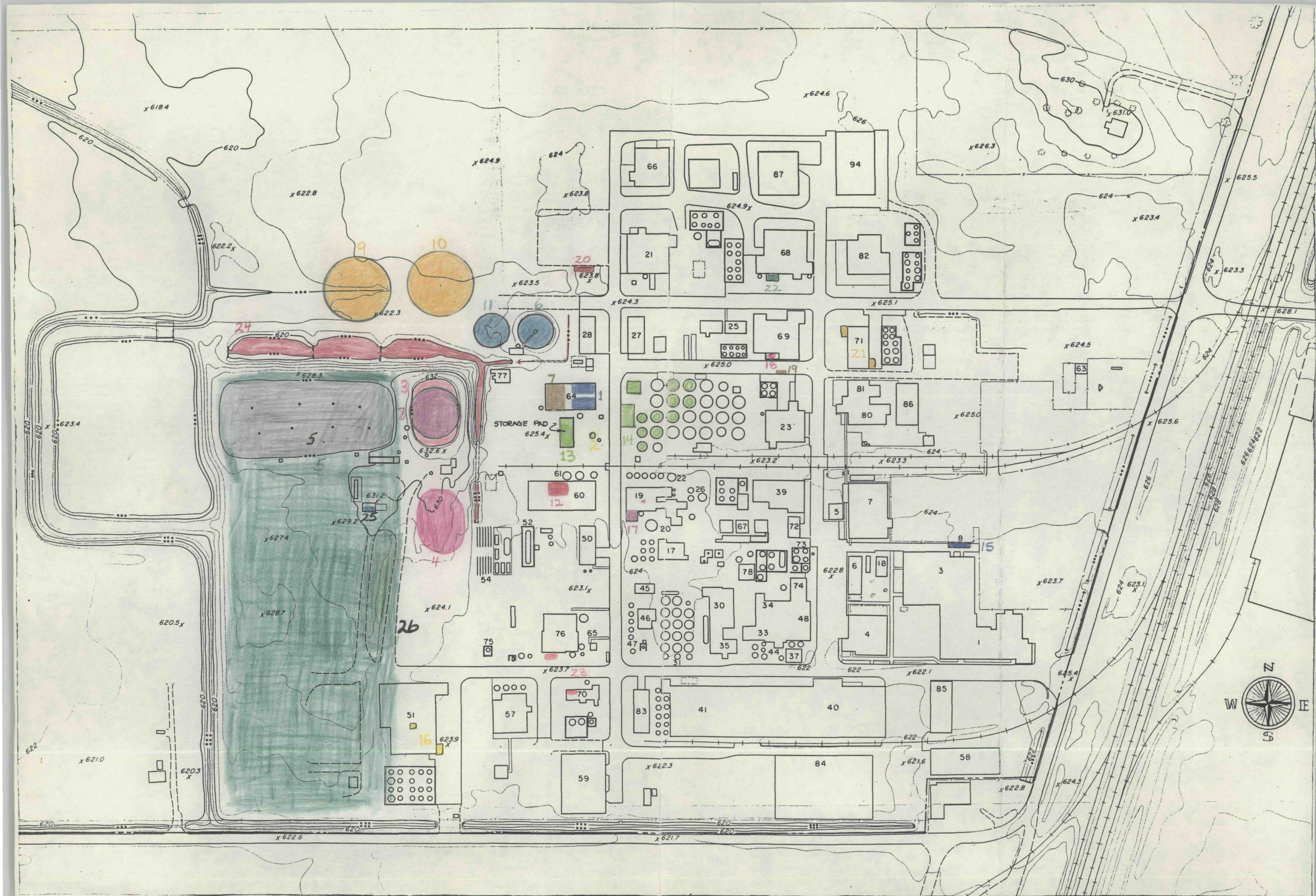


Henkel Corporation
10/20/78
1 inch \approx 200 feet







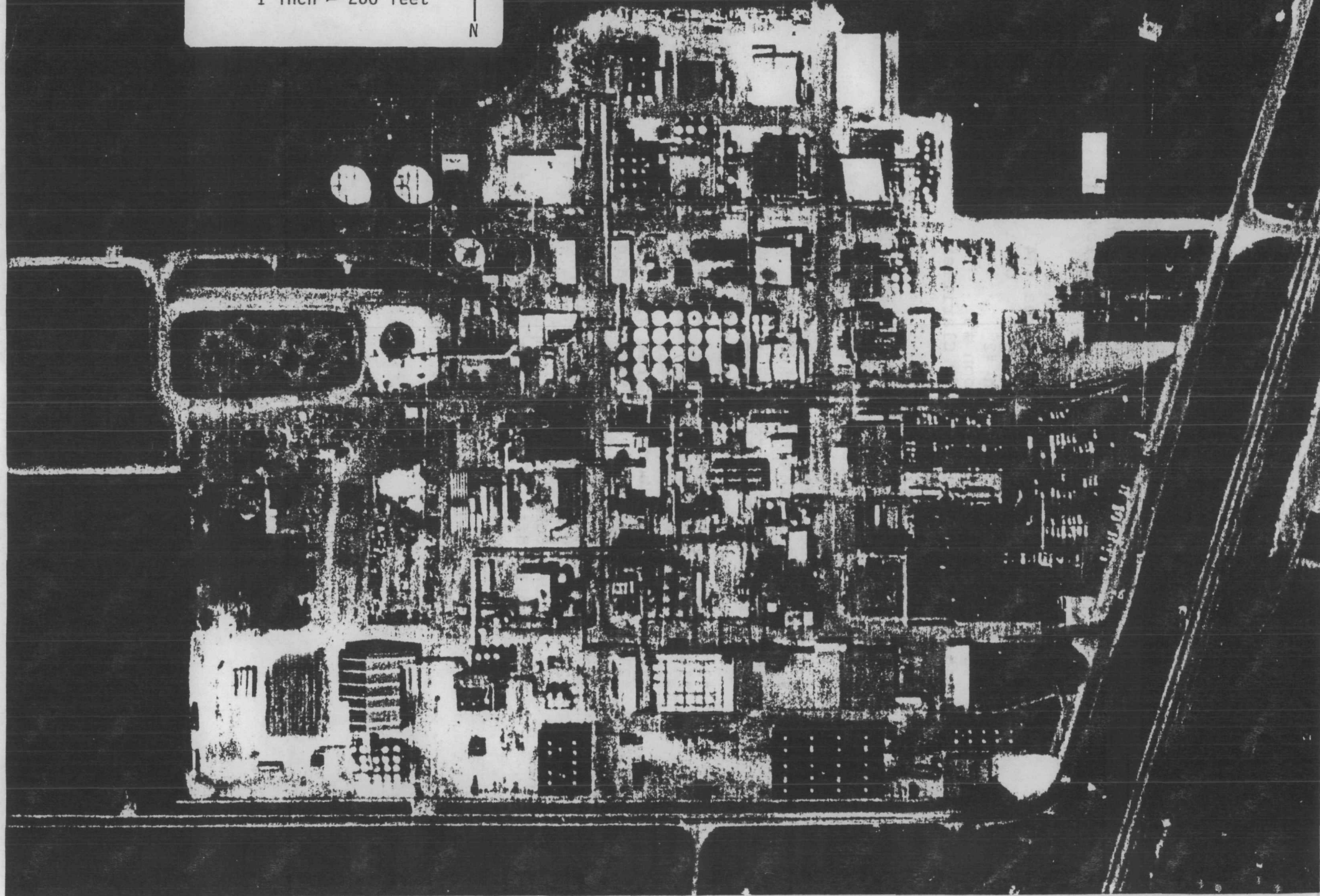


SWMU Identification

After review of IEPA files, conversations with the state RCRA permit staff and a Visual Site Inspection, 26 Solid Waste Management Units (SWMU's) were identified at Henkel Corporation. The SWMU's consist of the following:

- #1 Primary Treatment, Area #64
- #2 Waste Oil Storage Tank, Area #64
- #3 750,000 Gallon Lagoon #1
- #4 650,000 Gallon Lagoon #2
- #5 3,500,000 Gallon Lagoon #3
- #6 55' Concrete Secondary Clarifier
- #7 Sludge Filter Press
- #8 Primary Clarifier
- #9 Westernmost Aeration Basin
- #10 Easternmost Aeration Basin
- #11 Westernmost Secondary Clarifier
- #12 Boiler House, Area #60
- #13 Container Hazardous Waste Storage Pad
- #14 Waste Oil Tank Farm, Area #11
- #15 Laboratory Satellite Storage Pad, Area #3
- #16 Versacure Satellite Waste Storage Pad
And Bag House, Area #51
- #17 Polymer Plant Bulk Waste Storage, Area #19
- #18 Hazardous Waste Storage Tank, Area #69
- #19 Waste Tar Tank, Area #69
- #20 Bulk Waste Storage, Area #26
- #21 Acrylics Satellite Waste Storage Pads, Area #71
- #22 Vitamin E Satellite Waste Storage Pad, Area #68
- #23 Spent Palladium Storage Pads, Areas #70 & #76
- #24 Facility Storm Drainage System
- #25 Refuse Compactor and Dumpster
- #26 Old Landfill/Lagoon Area, West Side of Facility

Henkel Corporation
07/31/86
1 inch \approx 200 feet



SWMU's #1 - #11: Wastewater Pretreatment Plant, Areas
#64 and #98
(photographs #1 - #10)

Unit Description: The old pretreatment plant consisted of primary treatment in two 15,000 gallon pits (SWMU #1). Located in the building at area 64, the two concrete pits where and still are used to skim off 75-90% of the floating oils. SWMU #2 is located in area #64 where an 8,500 gallon tank (64 Z-1) was used to store the waste oil prior to burning in 2 boilers. After pH adjustment, the wastewater entered lagoon #1 (SWMU #3) with a 750,000 gallon capacity and 4 - 50 hp floating aerators. Gravity flow into the 3,500,000 gallon lagoon #3 (SWMU #5) followed with extended aeration via 8 -500 hp floating models. From lagoon #3, the wastewater went to a concrete, 230,000 gallon (55' diameter) clarifier (SWMU #6) for solids reduction. Underflow solids were either sent back to lagoon #1 or went to the filter press (SWMU #7) for dewatering. The sludges are stored in open, 15 cubic yard boxes next to the filter press, prior to disposal at either Milford or Kankakee landfill. From the lift station, the effluent was pumped to the Kankakee sewer system/POTW.

South of Lagoon #1 was another lagoon with dimensions of 85 foot by 110 foot. Lagoon #2 (SWMU #4) was used for aeration until the late 1960's.

The new pretreatment plant consists of a new 175,000 gallon primary clarifier (SWMU #8 - built on top of SWMU #3 aka lagoon #1), 2 aeration basins (SWMU's #9 and #10) and an additional secondary clarifier (SWMU #11). Waste oils are still skimmed off at the old primary clarifier (SWMU #1) before the wastewater enters the new unit (SWMU #8). Also, the waste oils are still stored at SWMU #2 prior to being shipped to either Beaver Oil in Joliet, IL. or Breslube in E. Chicago, IN.

Age of Unit: The old pretreatment plant began operations in 1972, the new plant took over in 1986. According to Henkel Corporation, the Kankakee POTW has served

Henkel Corporation/General Mills Chemicals since its inception in 1947.

Date of Closure: The new unit is active with no anticipated date of closure. According to Henkel Corporation, in May of 1986, Lagoon #1 (SWMU #3) was filled in with sand, upon which was built the new primary clarifier (SWMU #8). Lagoon #2 (SWMU #4) was backfilled sometime in the late 1960's. Lagoon #3 (SWMU #5) was filled in October of 1986.

Wastes Managed: The sources of wastewater include those from chemical processes, boiler and cooling tower blow-downs, floor washings, loading and unloading pad spills and washings, plant sanitary waste, and some water from road and roof drains. Normal flow through the plant is 1 MGPD. Current wastewater contain trace solvents such as hexane, toluene, acetone, ethylene dichloride and isopropanol. IEPA has classified the water, dirt and sludge as special waste that is generated at a yearly rate of about 7200 cubic yards.

The waste oil skimmed off of SWMU #1 is 85-90% vegetable oil and 10-15% slop oils and is classified as a special waste.

Release Controls: Overflows from the clarifiers are diverted to the lift station and pumped to the Kankakee sewer system/POTW.

History of Release: The Division of Air Pollution has recorded numerous complaints of noxious smells coming from the facility and particularly the pretreatment plant. A groundwater release from the old lagoon system was not proved with the students t-test although groundwater mounding was observed around the lagoons during the monitoring in 1983.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high due to the prior use of an unlined lagoons in the pretreatment process.

Surface Water: The release potential to surface water is high due to the proximity of an adjacent drainage ditch.

Air: The release potential to air is high due to the volatile organic constituents of the wastes managed.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

SWMU #12 Boiler House, Area #60
(photograph #11)

Unit Description: The boiler house is where the process steam is produced. Two Brooks Boilers used fuel oil and waste oil to fire the units. The waste oil was pumped via 6" overground piping from SWMU #2 in area #64 (tank 64 Z-1), and also from area #11, where an additional 10 tanks stored waste oil generated from the vitamin E production (SWMU #14). Both the waste oil from skimmed at area #64 and the waste oil from area #11 are of the same nature.

Age of Unit: Boilers #1 and #2 were purchased from the military in 1946. Waste oils were burned in the boilers from 1976 to 1986. Two additional boilers were obtained in 1967 (Boiler #3) and 1976 (Boiler #4) although these were gas-fired and not used to burn waste oils.

Date of Closure: The boilers stop burning waste oil in 1986.

Wastes Managed: Waste oil contained 10-15% slop oils and 85-90% vegetable oil distillate. The feed rate was 7.5 pounds of waste oil per gallon. According to the RCRA Part A, 129,600 gal/day were treated for fuel recovery.

Release Controls: Spills would have been routed to the drains which go to the WWTP.

History of Releases: There is no documented releases from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is moderate due to the possibility of incomplete combustion of the waste oil.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

SWMU #13: Container Hazardous Waste Storage Area
(photographs #4, #12 - #14)

Unit Description: The 9-inch thick reinforced concrete pad has dimensions of 30 foot by 100 foot, with a load bearing capacity of 4,500 lbs. The pad is divided into 4 areas to store separate incompatible wastes.

Age of Unit: Wastes have been stored at this area since 1982. The pad was constructed in the spring of 1982.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: Quality control samples, proprionic acid, miscellaneous solvents, resins, etc.; acidic nitrobenzene, acidic acetonitrile; acrylonitrile/carbon - filters; starch gel/methanol; ethylene dichloride/sterols/vitamin E; methylene chloride; acrylic resin/xylene; solvent/resins; vitamin E/acetone/clay; chloroform/carbon - filters; miscellaneous solvents -isopropanol, toluene, xylol, etc.; and sodium aluminate. The wastes are listed as D001, D002, F003, and F005. Acidic nitrobenzene, F004, is no longer generated as of October, 1989.

Release Controls: The aggregate surface course starting at the west end of the concrete pad is sloped to drain away from the edge so that run-on of rain water will not be a problem. The concrete storage area slopes toward a collection sump on the east edge with a slope of 2.13%. The collection sump along with the sloped curbed storage area provides a holding capacity of 544 cubic feet or 4,070 gallons.

History of Releases: There is no documented releases from this unit, but there were stains on the concrete surface. The storage area and sump is in good condition, free of any gaps, holes or cracks.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low due to unit design.

Surface Water: The release potential to

surface water is low because of the units design.

Air: The release potential to air is low because the wastes are stored in sealed drums.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

SWMU #14: Waste Oil Tank Farm Area #11
(photograph #15 - #18)

Unit Description: Ten of thirty-three tanks were designated for storage of waste oil in area #11 of the facility. The tanks range from 7,500 gallons to 84,000 gallons. Tanks Z-1, Z-3, Z-4, A-1, A-2, B-2, B-3, B-4, C-3 and C-4 totaling 698,300 gallons were listed in the Part A as storage tanks for waste oil. Fuel oil, mineral acid and raw material feed for the vitamin E process are stored in the remaining tanks. Currently, only the 7,500 gallon, cone bottom tanks, Z-3 and Z-4 are used for waste oil storage. Waste oils are drummed and stored on the west side of the tank farm. Just north of the drummed oil waste is another area of drummed tank bottoms.

Age of Unit: Waste oils have been stored in the tanks since the facility first started in 1947.

Date of Closure: Other than Z-3 and Z-4, most of the tanks are now used to contain product. Tank B-4, a 84,000 gallon tank is labeled as a waste oil tank.

Wastes Managed: Waste oil containing 85-90% vegetable oil distillate and 10-15% slop oils classified as a special waste.

Release Controls: There are no secondary release controls. The tanks are on a gravel base.

History of Release: This unit may have contaminated soil at the pipe coupling areas, and where the drums are filled under the cone bottom tanks.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high.

Surface Water: The release potential to surface water is moderate due to the possibility of the waste entering the storm sewer drain.

Air: The release potential to air is low to moderate due to the low volatile organic constituents of the wastes.

Subsurface Gas: The potential for the

generation of subsurface gas is low due to waste constituents.

SWMU #15: Laboratory Satellite Waste Storage Pad, Area #3
(photograph #19)

Unit Description: In area #3, adjacent the Henkel's offices, is a large laboratory which is used to physical test and quality check products. On the north side of the laboratory is an 8 foot by 45 foot covered storage pad, floored with a concrete pad. The satellite waste storage pad is used to store lab chemicals as well as lab wastes.

Age of Unit: The unit has been used since approximately 1980.

Date of Closure: The laboratory and pad are presently in use with no anticipated date of closure.

Wastes Managed: Miscellaneous solvent and resin wastes (F003, F005 and D001). Waste are generated from this unit at about 30 - 55 gallon drums per year.

Release Controls: The wastes are contained in drums with no secondary containment.

History of Releases: There is no documented or visual evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low do to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is moderate due to the volatile organic constituents of the wastes managed.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

SWMU #18 Hazardous Waste Storage Tank, Area #69
(photograph #25)

Unit Description: The methylation process occurs in area #69 where product from area #17 is methylated to form vitamin E. In addition to the feed, light solvents, an acid and an alkali are used in the process. The hazardous waste generated is a concentrated tin liquor that is stored in a 10 foot diameter tank at the area. The tank capacity is 8000 gallons and is located approximately 400 yards west of the property line in area #69.

Age of Unit: The methylation process started in 1970 and the tank unit has been used since the mid 1970's.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The wastes concentrated tin liquor is listed as D002. About 68,072 gallons is generated per month, which goes out in bulk shipment to be incinerated at either M & T Chemicals in Carrollton, KY or Mason Metals in Sherrerville, IN.

Release Controls: The diked area around the tank is in good condition and is capable of containing 100% of the tank volume.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high due to unit design.

Surface Water: The release potential to surface water is high due to unit design.

Air: The release potential to air is moderate due to the volatile nature of trichloroethylene.

Subsurface Gas: The potential for the generation of subsurface gas is moderate.

SWMU #19 Waste Tar Tank, Area #69
(photograph #26)

Unit Description: Another by product of vitamin E production at area #69, is a neutralized tin liquor tar. This special waste is stored across from SWMU #18 in a 5 foot diameter roll-off tank supplied by KID Disposal (Waste Management, Inc.), which operates the Kankakee Landfill.

Age of Unit: The waste was drummed from 1970 until 1983 when bulk storage started.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The three material components of the neutralized tin liquor tar include: tall oil fatty acid, phyto residue, and sodium hydroxide. About 7,700 gallons are generated per month which is disposed of at either Multi-Co. Landfill, Inc. or the Kankakee Landfill.

Release Controls: There is no secondary containment, however the tank is set on a concrete area.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to the stability of the tar.

Subsurface Gas: The potential for the generation of subsurface gas is low.

SWMU #20 Bulk Waste Storage, Area #26
(photograph #27)

Unit Description: A large roll-off box is used to store a special waste generated at area #26.

Age of Unit: In 1976, the old flaker was in use and in 1984 a new building was erected.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The waste is described as melt tank cleanings which have material components of sterols, sand and rock, dirt, water, wood debris, glass and scrap metal. About 100 cubic yards is generated per year that is bulk shipped as special waste to Multi-Co. Landfill, Inc., of IL.

Release Controls: There is no secondary containment.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high due to unit design.

Surface Water: The release potential to surface water is high due to unit design.

Air: The release potential to air is low due to the stable nature of the waste.

Subsurface Gas: The potential for the generation of subsurface gas is moderate.

SWMU #21 Acrylics Satellite Waste Storage Pads, Area #71
(photograph #23 & #31)

Unit Description: In area #71, acrylic monomers are combined with solvents to form acrylic coating materials. A 10 foot by 10 foot, concrete satellite storage pad is used to store the solid wastes generated by the process.

Age of Unit: The unit has been used since the early 1970's.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The solid waste is an acrylic mixed with xylene. The waste is classified as D001 and generated at about 4 drums per month. The drums are transferred to SWMU #13 within 3 days.

Release Controls: There is no diking on the pad which was observed to have cracks.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is moderate due to cracks in the concrete base.

Surface Water: The release potential to surface water is low to unit design.

Air: The release potential to air is moderate due to the volatile nature of

Subsurface Gas: The potential for the generation of subsurface gas is moderate.

SWMU #22 Vitamin E Satellite Waste Storage Pad, Area #68
(photograph #28)

Unit Description: In area #68, the product from area #69 is extracted, distilled and crystallized to make liquid and solid vitamin E. Light solvents are used in the process. The drummed waste is stored on a 10 foot by 10 foot area of a concrete pad.

Age of Unit: The unit has been used since 1982.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: Wastes generated at area #69 are a mixture of vitamin E with acetone and hexane, diatomaceous earth, and filters. The drummed waste is transferred to the large hazardous waste pad (SWMU #13) within 48 hours.

Release Controls: The concrete pad is not diked.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is moderate due to the volatile nature of acetone.

Subsurface Gas: The potential for the generation of subsurface gas is low.

SWMU #23 Spent Palladium Storage Pads, Areas #70 and #76
(photograph #29 & #30)

Unit Description: At area #76, dimer amines are produced from fatty acids, dimer nitrile, and ammonia. Also, surfactants are produced from amines, acrylate and an alkali. A palladium catalyst is used to speed the hydrogenation process which generates a spent palladium waste. The waste is stored on the concrete foundation of the old deriphat building at area #70 until it is shipped off-site. The spent palladium catalyst is staged on the concrete next to the south side of the building at area #76, prior to transfer over to area #70.

Age of Unit: The waste has been generated since about the beginning of operations in 1948. The deriphat building was torn down in 1981 after which, the foundation was used to store the drummed waste.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The spent palladium catalyst goes to a reclamation plant, PGP, Inc. on the east coast.

Release Controls: Neither the concrete foundation nor the concrete area on the south side of building #76 are diked.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high due to unit design.

Surface Water: The release potential to surface water is high due to unit design.

Air: The release potential to air is low due to the non-volatile nature of the catalyst waste.

Subsurface Gas: The potential for the generation of subsurface gas is low.

SWMU #24 Facility Storm Drainage System
(photograph #2, #7 & #32 - #34)

Unit Description: The facility drainage system consists of two ditches that join to form a series of 3 small overflow ponds. The last pond enters a large storm water lake that is used for the facility's fire protection. What appears to be waste oils, can be observed on the sides of the rock lined drainage system

Age of Unit: The unit has been used since 1947.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The waste appears to be that of which is generated from the vitamin E process.

Release Controls: The ponds are unlined.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is high due to unit design.

Surface Water: The release potential to surface water is high due to unit design.

Air: The release potential to air is moderate due to the volatile nature of some of the solvents used at the facility.

Subsurface Gas: The potential for the generation of subsurface gas is moderate.

SWMU #25 Refuse Compactor and Dumpster
(photograph #35)

Unit Description: A refuse compactor and dumpster is used to rid the facility of trash. The unit is located south of the primary clarifier (SWMU #8).

Age of Unit: The dumpster was in use beginning in the early 1970's.

Date of Closure: The unit is active with no anticipated date of closure.

Wastes Managed: The waste consists of all the facilities trash. KID picks up the dumpster weekly.

Release Controls: There is no secondary containment.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater is low due to unit design and waste composition.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to waste composition.

Subsurface Gas: The potential for the generation of subsurface gas is low.

SWMU #26 Old Landfill/Lagoon Area, West Side of Facility
(aerial photograph)

Unit Description: The 1963 aerial photograph shows an approximately 1.5 acre lagoon next to a 3.25 acre landfill on the west end of the facility. The landfill is where lagoon #3 was built.

Age of Unit: unknown

Date of Closure: Use of the area may have been discontinued after 1972 when the first wastewater pretreatment plant was built.

Wastes Managed: unknown

Release Controls: There was no secondary containment.

History of Releases: There is no documented evidence of a release from this unit.

Conclusions: Soil/Groundwater: The release potential to soil or groundwater was high due to unit design.

Surface Water: The release potential to surface water was high due to landfill runoff and lagoon overflow.

Air: The release potential to air may have been high due if volatile wastes were disposed.

Subsurface Gas: The potential for the generation of subsurface gas was moderate.

Compliance History

The facility has had only a few past violations (not posting danger signs, exceeding 500 drummed waste limit). Violations were corrected.

Visual Site Inspection

At 10:23 pm on June 12, 1990, a visual site inspection was conducted by Tim Murphy and Gred Dunn of IEPA. The facility was represented by Greg Rister, Manager of Safty and Regulatory Affairs since 1982. The weather conditions were sunny and pleasant, with a temperature of 85 degrees Fahrenheit.

After introductions, Mr. Rister answered a few questions concerning the history of the facility and informed us of the facility's SWMU's. The group of us then left the offices and proceeded with a golf cart tour of the facility. Most of the active SWMU's were observed and photographed. No obvious contamination was noticed as much of the facility was covered either with concrete, asphalt or gravel. The inspection ended at 12:35.

Because some of the photographs did not turn out and additional SWMU's were identified, a return visit was conducted on January 18, 1991 beginning at 10:30.

During the return visit, the IEPA team of Tim Murphy, Ron Harmon and Clarence Smith discussed the issues pertaining to the RCRA Part B permit application with Mr. Rister. After the meeting, the group made a quick visit of each SWMU not previously photographed. The weather was cold, damp and windy. The Visual Site Inspection ended at 12:45 pm.

Site Releases/Sampling

Soil sampling has never been conducted at the facility, however due to the evidence of spills, the greatest potential for soil and groundwater contamination exists with SWMU's #1, #3, #5, and #26.

Groundwater Targets:

In 1982, Dames and Moore conducted a hydrogeologic study and installed seven monitoring wells. Boring logs indicate materials near the ground surface as fill (silty clay with some coarse gravel, sand and slag) followed by silty clay to a depth of 15-20 feet, which in turn, followed by fractured Silurian Dolomite (aquifer). The hydraulic gradient was calculated at .0002 with a regional ground water flow direction of north-northeast.

As noted in the SWMU identification section (SWMU's #1-11) of this report, the students t-test yielded no significance on indicator parameters from the monitor wells.

Located within a quarter mile of the facility boundary are five private supply wells serving about 14 people (based on the 1990 Census Data of 2.78 persons per household). The wells are open to the shallow Silurian dolomite. A house count of a four mile facility radius estimates that 4873 people draw water from the aquifer.

A boring log generated by the Illinois Department of Transportation (IDOT) describes the geology 3/4 of a mile southeast of the facility as follows:

Depth (feet)	<u>Geologic Material</u>
0-2	Clay Loam
3-6	Sandy Loam
6-11	Silty Clay Loam
11-17	Dense Gray Limestone

End Of Boring

Surface Water Targets

The general topography of the area is relatively flat and some of the facility runoff is intercepted and flows into the pretreatment plant. An intermediate flowing ditch runs north alongside the storm water retention pond. After about 5200 feet, the ditch drains into Gar Creek Ditch. The Creek flows east about a mile to the Kankakee River, where at just 2 tenths of a mile downstream is the intake for Consumers Illinois Water Company which supplies Kankakee, Bradley, Bourbonnais and several outlying areas with water. The population served is approximately 55,000 people

Flood Insurance Maps indicate that the site is not located in a 500-year flood boundary.

Air Targets

Actual air releases have not been documented at the site although numerous complaints have been logged. The nearest resident is 2 tenths of a mile from the production area and a day care nursery is a quarter mile away. Within one mile of the site, there is a population of approximately 141 people.

Direct Contact

Facility access is restricted by a chain link fence surrounding the entire production area. Security guards are posted at the entrances to the facility.

Conclusions and Recommendations

Due to limited receptors, the facility does not score high enough to continue in the CERCLA process, however, a RCRA Facility Investigation (RFI) and/or conditions of the Part B Permit should address sampling of the potentially contaminated SWMU's.

The following table lists the facility SWMU's and a summary of suggested further actions for each.

Unit No.	Unit Name	Dates of Operation	Suggested Further Action	Evidence of Release
1-1	Wastewater Pretreatment Plant Areas #64 & #98	1972-present 3 lagoons not used after new system was built in 1986	Sample monitor wells for Appendix I pollutants (35 IAC Sec. 724) Sample soils in lagoon areas for TCLP Install secondary containment for the waste oil storage tank	No
12	Boiler House, Area #60	1976-1986	No further action	No
13	Container Hazardous Waste Storage Area	1982-present	No further action	No
14	Waste Oil Tank Farm Area #11	1947-present	Sample soils for TCLP Install secondary containment	Stained gravel
15	Lab Satellite Waste Pad Area #3	approx. 1980-present	Install secondary containment	No
16	Versacure Satellite Waste Pad and Bag House Area #51	1982-present	Sample nearby soils for TCLP Install secondary containment	spills
17	Polymer Plant Bulk Waste Storage Area #19	1959-present	No further action	No
18	Hazardous Waste Storage Tank Area #69	approx. 1975-present	No further action	No
19	Waste Tar Tank Area #69	1983-present	Install secondary containment	No
20	Bulk Waste Storage Area #26	1976-present	Install secondary containment Store excess waste on pad	Waste on ground
21	Acrylics Satellite Waste Pad Area #71	early 1970's-present	Fix concrete cracks, install secondary containment, sample soils for TCLP	concrete cracks
22	Vit E Satellite Waste Pad Area #68	1982-present	Install secondary containment	No
23	Spent Palladium Pads Areas #70 & #76	1981-present	Install secondary containment Sample soils for TCLP	No
24	Storm Drainage System	1947-present	Sample water and sediment for TCLP	Staining
25	Refuse Compactor and Dumpster	1970's-present	No further action	No
26	Old Landfill/Lagoon Area West Side of Facility	approx. 1947-1972	Sample monitor wells as in SWMU's #1-#11 Sample soils in the area to sufficient depth for TCLP	old air photo

DATE: 6-12-90

TIME: 12:03 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 35

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the North-Northeast of
the trash compactor
and trash bin (SWMU
#25).



DATE: 1-18-91

TIME: 11:50 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 36

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the south of a 100' x
200' fenced area
described as a drum
storage area in the
RCRA Part A.



DATE: 5-12-90

TIME: 12:10 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 33

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the east of the storm
water pond series (SWMU
24).



DATE: 5-12-90

TIME: 12:10 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 34

LOCATION: Henkel Corp.
So. Kensington Rd.
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the southwest of the
storm water pond series
(SWMU # 24). Note: oily
sides of gravel bank.



DATE: 1-18-91

TIME: 12:22 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 31

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the north at a place
where acylic wastes use
to be stored (NW corner of
area #71) (SWMU #21).



DATE: 1-18-91

TIME: 11:52 AM

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 32

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the north near the
new primary clarifier (SWMU
#7) of the storm water
drainage ditch (SWMU #24)



The westernmost secondary clarifier is ahead of the ditch (SWMU #11).

DATE: 6-12-90

TIME: 11:39 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 29

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the south of area #70 -

deriphat foundation,

used to store spent -

paladium (SWMU #23).



DATE: 1-18-91

TIME: 11:42 Am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 30

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the north of the area #76,

used to store spent

paladium (SWMU #23).



DATE: 1-18-91

TIME: 12:10 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 27

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the north of the bulk

waste storage at area #26

(SWMU #20)



DATE: 1-18-91

TIME: 12:20 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 28

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the north of the vitamin E

satellite waste storage

pad at area #68 (SWMU

#22)



DATE: 5-12-90

TIME: 11:43 AM

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 25

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the Northeast of the
hazardous waste, 8000
gallon storage tank at
area # 69 (SWMU #18)



DATE: 5-12-90

TIME: 11:49 AM

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 26

LOCATION: Henkel Corp.
So. Kensington Rd.
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the east-southeast of
the waste tank for holding
Neutralized tin liquor
tar (SWMU #19) at area
69



DATE: 6-12-90

TIME: 11:49 Am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 23

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the west of the acyllics
satellite storage pad
at area #71 (SWMU#21).



DATE: 1-18-91

TIME: 12:25 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 24

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the North of area #19's
polymer plant where
filtered special waste
(bentonite) is stored in
~ 20 cu yd. boxes (SWMU#17)



DATE: 5-12-90

TIME: 11:37 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 21

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the south-southeast of
the baghouse at area
#51 (SWMU #16).



DATE: 5-12-90

TIME: 12:13 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 22

LOCATION: Henkel Corp.
So. Kensington Rd.
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the North? of the dust
collection system at
area # 19 (SWMU #17)



DATE: 6-12-90

TIME: 12:20 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 19

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the North-Northeast of
the laboratory satellite
storage pad at area #3
(SWMU #15)



DATE: 1-18-91

TIME: 11:45 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 20

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the west of the
versacure satellite
storage pad (SWMU #16)
at area #51. Note: spillage
by doors.



DATE: 6-12-90

TIME: 12:15 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 17

LOCATION: Henkel Corp.

So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the Southeast of one
of the larger tanks (B-4)
that had held waste
oil in area #11 (SWMU #14).



DATE: 1-18-91

TIME: 12:15 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 18

LOCATION: Henkel Corp.

So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the North east of waste
oil tank bottoms, drummed
at area #11 (SWMU #14).



DATE: 6-12-90

TIME: 11:29 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 15

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the south of cone

bottom tank Z-3 in

area #11 (SWMU #14) used

to store waste oil.



DATE: 1-18-91

TIME: 12:12 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 16

LOCATION: Henkel Corp.

So. Kensington Rd.,

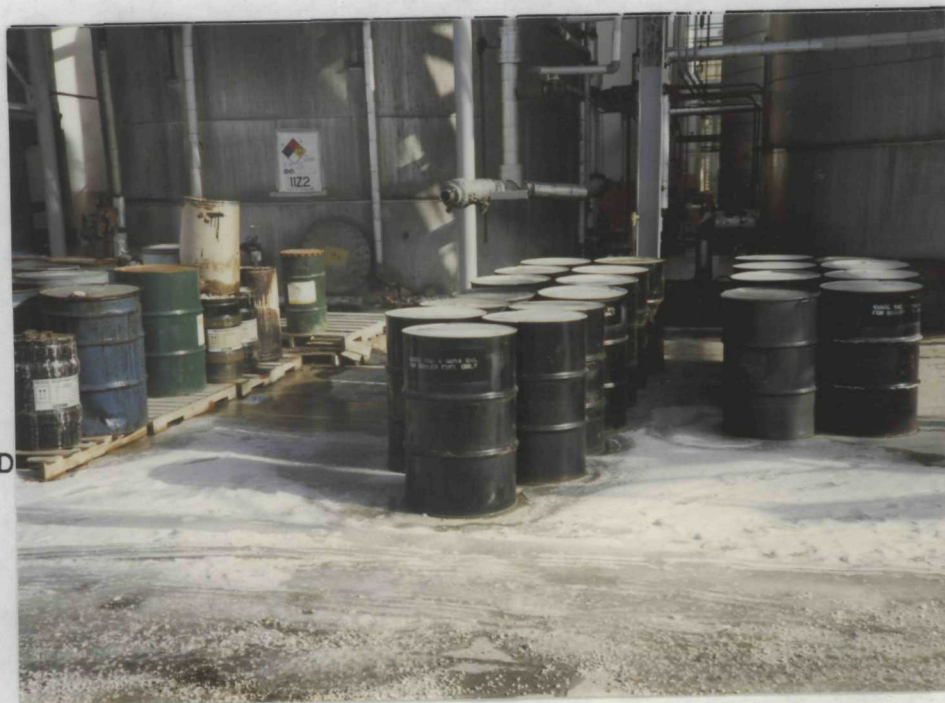
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the east-northeast of

drummed waste oil at

area #11 (SWMU #14)



DATE: 1-18-91

TIME: 11:55 Am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 13

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the east-southeast of
the hazardous waste
container storage pad
(SWMU #13)



DATE: 1-18-91

TIME: 11:55 Am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 14

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the north of the
hazardous waste storage
pad collection sump
(SWMU #13)



DATE: 6-12-90

TIME: 11:58am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 11

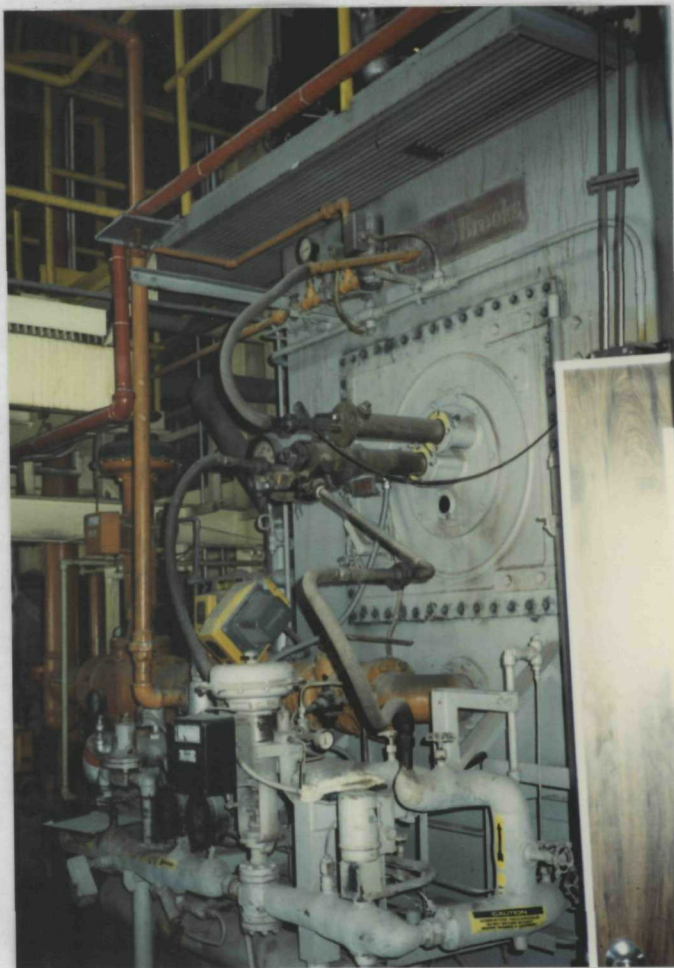
LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the southeast of one of
the boilers used to burn
special waste oil, (SWMU
#12)



DATE: 1-18-91

TIME: 11:55pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 12

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the North-Northeast of
the hazardous waste
container storage pad
(SWMU #13).



DATE: 5-12-90

TIME: 11:25 Am

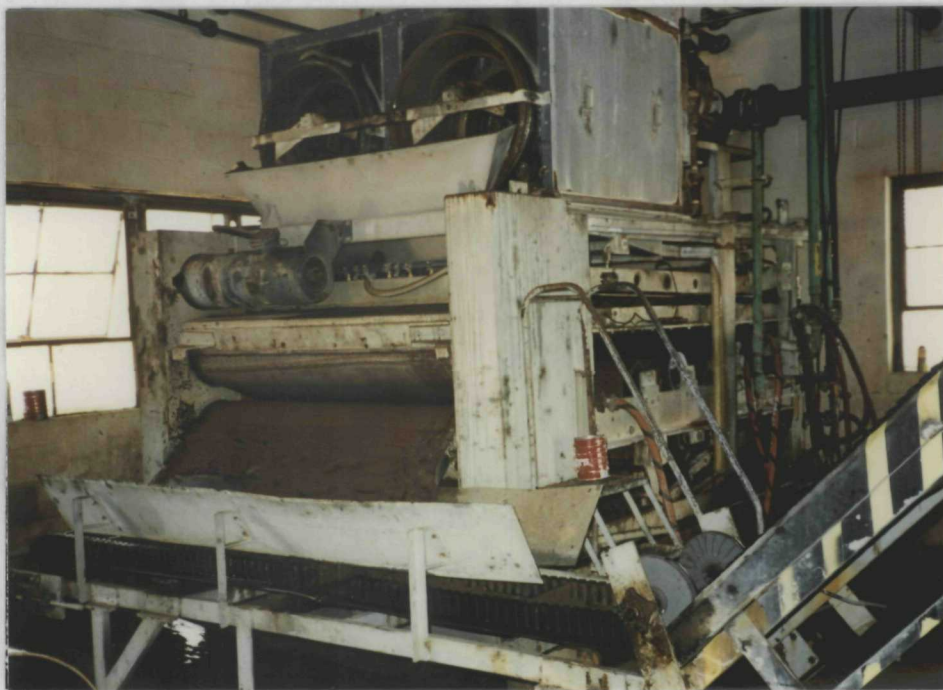
PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 9

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the southwest of the
filter press (SWMu #7)
IN area #64, across from
which, are the two 15,000
gallon pits (SWMu #1).



DATE: 5-12-90

TIME: 11:26 Am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 10

LOCATION: Henkel Corp.
So. Kensington Rd.
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the south of the 15 cu.
yd. boxes that hold
the sludge for transport,
(SWMu #4)



DATE: 1-18-91

TIME: 12:05pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 7

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the south-southwest over-
looking the westernmost
airation basin (SWMU#9)

and the drainage ditch
ponds (SWMU#24), with a good look at the filled-in lagoon #3
Now used for old equipment storage.

DATE: 1-18-91

TIME: 12:05pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 8

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the east-southeast over-
looking the easternmost
airation basin (SWMU#10)

with a glimpse of the

top of the easternmost, 55' diameter secondary clarifier (SWMU#6).



DATE: 5-12-90

TIME: 12:09pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 5

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the southeast of lagoon
#3 area after filling,
(SWMU #5).



DATE: 5-12-90

TIME: 12:08pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 6

LOCATION: Henkel Corp.
So. Kensington Rd.
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD
the southeast overlooking
the stormwater retention
pond, with lagoon #3 (SWMU #5)
and the new primary clarifier (SWMU #8) / old lagoon #1 (SWMU #3)
in view.



DATE: 1-18-91

TIME: 12:05 pm

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 3

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD



the Southeast overlooking
the easternmost aeration
basin (SWMU #10), with the

two 15,000 gallon primary (SWMU #1)
treatment pits located in the building with the 2 brown garage
doors (area #64). Steam inside this building fogged the camera lens.

DATE: 1-18-91

TIME: 11:55 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 4

LOCATION: Henkel Corp.
So. Kensington Rd.,
Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD



the east overlooking the
hazardous waste storage
pad (SWMU #13), with the
white cone bottom tank

(64 Z-1 - 8,500 gallon) designated as SWMU #2

DATE: 1-18-91

TIME: 11:50 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 1

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the north west of the new
primary clarifier (SWMU # 8)

built on top of lagoon #1

(SWMU # 3)



DATE: 1-18-91

TIME: 12:05 am

PHOTOGRAPH TAKEN BY:

Tim Murphy

PHOTO NUMBER: 2

LOCATION: Henkel Corp.

So. Kensington Rd.,

Kankakee, IL

COMMENTS: PICTURE TAKEN TOWARD

the south overlooking the
drainage ditch ponds (SWMU # 24)

with the primary clarifier (SWMU # 8) built on top of lagoon #1
(SWMU # 3). The eastern portion of filled-in lagoon #3 (SWMU # 5)
is seen with old equipment on top ←.



ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

1
N

SITE NAME: Henkel Corp.
SITE ID#: 005215769

USGS TOPOGRAPHIC MAPS

NAME: Bourbonnais, IL 848
DATE: 1963
REVISED: 1973

NAME: Bradley, IL 84A
DATE: 1964
REVISED: 1973

NAME: West Kankakee, IL 84C
DATE: 1964
REVISED: 1973

NAME: Kankakee, IL 84D
DATE: 1964
REVISED: 1973

LEGEND

□ SITE LOCATION

△ PUBLIC WELL

● NEAREST WELL

● SURFACE WATER INTAKE

ILLINOIS

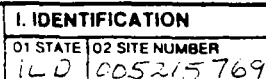
QUADRANGLE LOCATION

1 1000 0 1000 2000 3000

This topographic map of Kankakee, Illinois, provides a detailed view of the city and its surroundings. The Kankakee River flows through the center of the map, with several bridges crossing it. The city of Kankakee is shown with a grid of streets and various landmarks, including the Kankakee Airport, Kankakee State Hospital, and several parks. The Henkel Corporation site is marked with a square symbol and labeled 'HENKEL CORPORATION'. The map also shows contour lines, a grid, and various other features such as the Kankakee River, Kankakee Airport, and several parks. The map includes a legend, a scale bar, and a quadrangle location map.

00910550007

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 1 - SITE INFORMATION AND ASSESSMENT		I. IDENTIFICATION 01 STATE 02 SITE NUMBER 1LD 005215769	
II. SITE NAME AND LOCATION			
01 SITE NAME (Legal, common, or descriptive name of site) Henkel Corporation		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER So. Kensington Rd. P.O. Box 191	
03 CITY Kankakee	04 STATE IL	05 ZIP CODE 60901	06 COUNTY Kankakee
09 COORDINATES LATITUDE 41 25 18.0		07 COUNTY CODE 091	
LONGITUDE 087 52 52.0		08 CONTOUR 15	
10 DIRECTIONS TO SITE (Starting from nearest public road) From I57 south of Kankakee, take route 45/52 North to A.O. Smith road, go left - west to S Kensington Rd. go left - south to the second entrance			
III. RESPONSIBLE PARTIES			
01 OWNER (if known) Henkel Corporation		02 STREET (Business, mailing, residential) 4620 W. 77th St.	
03 CITY Minneapolis	04 STATE MN	05 ZIP CODE 55435	06 TELEPHONE NUMBER 16121830-7831
07 OPERATOR (if known and different from owner)		08 STREET (Business, mailing, residential)	
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ (Agency name) <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER: _____ (Specify) <input type="checkbox"/> G. UNKNOWN			
14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3001 DATE RECEIVED: 11/18/80 MONTH DAY YEAR <input type="checkbox"/> B. UNCONTROLLED WASTE SITE (RCRA 103 a) DATE RECEIVED: _____ MONTH DAY YEAR <input type="checkbox"/> C. NONE			
IV. CHARACTERIZATION OF POTENTIAL HAZARD			
01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 03/18/88 MONTH DAY YEAR <input type="checkbox"/> NO		02 BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify)	
03 CONTRACTOR NAME(S): _____		04 SITE STATUS (Check one) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	
05 YEARS OF OPERATION 1948 Present		06 UNKNOWN	
07 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED F-listed, U-listed and D-listed wastes			
08 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION Groundwater (environment, population) Surface water (environment, population)			
V. PRIORITY ASSESSMENT			
01 PRIORITY FOR INSPECTION (Check one, if high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents) <input type="checkbox"/> A. HIGH (Inspection required promptly) <input type="checkbox"/> B. MEDIUM (Inspection required) <input type="checkbox"/> C. LOW (Inspect on time available basis) <input type="checkbox"/> D. NONE (No further action needed, complete current disposition form)			
VI. INFORMATION AVAILABLE FROM			
01 CONTACT Greg Rister	02 OF (Agency/Organization) Henkel Corp.		03 TELEPHONE NUMBER 18151932-6751
04 PERSON RESPONSIBLE FOR ASSESSMENT Timothy J. Murphy	05 AGENCY IEPA	06 ORGANIZATION DLPC/RPMS	07 TELEPHONE NUMBER 12171782-6760
08 DATE 1 8 91		09 MONTH DAY YEAR	



01 PHYSICAL STATES <i>(Check all that apply)</i>	02 WASTE QUANTITY AT SITE <i>Measures of waste quantities must be independent</i>	03 WASTE CHARACTERISTICS <i>(Check all that apply)</i>
<input checked="" type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER FINES <input checked="" type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ <i>(Specify)</i>	<input type="checkbox"/> E. SLURRY <input checked="" type="checkbox"/> F. LIQUID <input type="checkbox"/> G. GAS TONS _____ CUBIC YARDS <u>111.000</u> NO OF DRUMS _____	<input checked="" type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> D. PERSISTENT <input checked="" type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input checked="" type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	UNKNOWN		
OLW	OILY WASTE	UNKNOWN		
SOL	SOLVENTS	UNKNOWN		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

[illegible]

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

IEPA DLPC File L0910550.07



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
ILD 005215764

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A GROUNDWATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
Groundwater test showed no significant contamination in B2/B3 using TOL, TOL, pH + concd.
however, unlined lagoon received wastewater containing the wastes listed in RCRA part A

01 ☒ B SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 55000 04 NARRATIVE DESCRIPTION
Lagoon which may have received facility run-off containing waste water for Kankakee
Bradley, Illinois is 2.2 miles beyond DPE

01 ☒ C CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
Complaints of odors from pretreatment plant were a regular occurrence in '70's

01 ☐ D FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
None observed

01 ☐ E DIRECT CONTACT 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
None observed

01 ☒ F CONTAMINATION OF SOIL 2/0 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (ACROSS) 04 NARRATIVE DESCRIPTION
Old lagoons/land fill may have contributed to soil contamination

01 ☒ G DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
None observed, however there are private wells in the area as close as 1/2 mile S.W. of Henkel

01 ☐ H WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None observed

01 ☐ I POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
None observed



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	005215769

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None documented or observed

01 ☐ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include number(s) of species)

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None documented or observed

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Soils runoff, standing liquids, leaking drums)

02 ☒ OBSERVED (DATE: 7-4-63) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____

04 NARRATIVE DESCRIPTION

Old Land fill / Lagoon area was unlined

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None documented or observed

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Prior to pretreatment plant in 1972, wastes may have directly entered lift station + WWTP of Kankakee

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

UNKNOWN

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 55000

IV. COMMENTS


V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

IEPA DLPC file L0910550007

Supporting Documentation

<u>Document</u>	<u>Reference Number</u>
Henkel Corporation RCRA Part A	1
Henkel Corporation/IEPA Correspondence 07/22/82	2
IEPA/Henkel Corporation Correspondence 11/15/82	3
IEPA Memorandum 05/09/83	4
Henkel Corporation Spill Prevention Control 09/16/83	5
Henkel Corporation/IEPA Correspondence 03/13/84	6
IEPA Inspection Waste Disposition Form 03/18/88	7
IDOT Borings	8
RCRA Part B Permit Application	*

* Available from IEPA and USEPA

FORM GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permit Program (Read the "General Instructions" before starting.)	I. EPA I.D. NUMBER F. 1LD005215761
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EPA I.D. NUMBER	REFERENCE NUMBER 1	PLEASE PLACE LABEL IN THIS SPACE	GENERAL INSTRUCTIONS. If a preprinted label has been provided, fill it in the designated space. Review the information carefully; if any of it is incorrect, or through it and enter the correct data in the appropriate fill-in area below. Also, if any the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
III. FACILITY NAME			
V. FACILITY MAILING ADDRESS			
VI. FACILITY LOCATION			

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK "X"			SPECIFIC QUESTIONS	MARK "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X		X	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

1. HENKEL CORPORATION

IV. FACILITY CONTACT

A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)
2. KAIN JOHN MGR PLANT ENGR	815 932 6751

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX	B. CITY OR TOWN	C. STATE	D. ZIP CODE
3. P O BOX 191	KANKAKEE	IL	60901

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE (if known)
5. SOUTH KENSINGTON ROAD	KANKAKEE	KANKAKEE	IL	60901	091

A. FIRST		B. SECOND	
7 2 8 2 1 (specify)	Plastics Materials and Resins	7 2 8 3 3 (specify)	Medicinals and Botanicals
C. THIRD		D. FOURTH	
7 2 8 4 3 (specify)	Surface Active Agents	7 2 8 9 9 (specify)	Chemical/Preparations, N.E.C.

VIII. OPERATOR INFORMATION

A. NAME		B. Is the name listed in item VIII-A also owner?	
HENKEL CORPORATION		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)		D. PHONE (area code & no.)	
F - FEDERAL S - STATE P - PRIVATE	M - PUBLIC (other than federal or state) O - OTHER (specify)	P (specify)	Private
E. STREET OR P.O. BOX		A 8 1 5 9 3 2 6 7 5	
SOUTH KENSINGTON ROAD			
F. CITY OR TOWN		G. STATE	H. ZIP CODE
BKANKAKEE		IL	6 0 9 0 1
		IX. INDIAN LAND	
		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)		D. PSD (Air Emissions from Proposed Sources)	
9 N	9 P		
B. UIC (Underground Injection of Fluids)		E. OTHER (specify)	
9 U	9	See Attachment	
C. RCRA (Hazardous Wastes)		E. OTHER (specify)	
9 R	9 Z		

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

The Henkel Corporation plant produces specialty chemical compounds including dimer acids, polyamide resins, fatty nitrogen compounds, Vitamin E, sterols and starch based polymers

F 9A/51

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in this application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
L. L. Adler V. P. - Engr. & Mfr.		11/17/8

COMMENTS FOR OFFICIAL USE ONLY

C	
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(This information is required under Section 3005 of RCRA.)

FOR OFFICIAL USE ONLY

APPLICATION DATE RECEIVED
APPROVED : 12.30.66

COMMENTS

11. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or a revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in item I above.

A. FIRST APPLICATION (place an "X" below and provide the appropriate date)

☐ 2. NEW FACILITY (Complete item below:.)

YR.	MO.	DAY

FOR NEW FACILITY PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEG

B. REVISED APPLICATION (place an "X" below and complete Item 1 above)

☐ 2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. **PROCESS CODE** — Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided to entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, the describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY — For each code entered in column A enter the capacity of the process.

1. AMOUNT – Enter the amount.

2. **UNIT OF MEASURE** — For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:		
CONTAINER (barrel, drum, etc.)	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS

<u>Disposal:</u>		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR
		HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR
		LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS

Treatment:

**TANK
SURFACE IMPOUNDMENT
INCINERATOR**

OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided; Item III-C.)

PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
1	TONS PER HOUR
2	TONS PER HOUR
3	TONS PER HOUR
4	TONS PER HOUR
5	TONS PER HOUR
6	TONS PER HOUR
7	TONS PER HOUR
8	TONS PER HOUR
9	TONS PER HOUR
10	TONS PER HOUR
11	TONS PER HOUR
12	TONS PER HOUR
13	TONS PER HOUR
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91	TONS PER HOUR
92	TONS PER HOUR
93	TONS PER HOUR
94	TONS PER HOUR
95	TONS PER HOUR
96	TONS PER HOUR
97	TONS PER HOUR
98	TONS PER HOUR
99	TONS PER HOUR
00	TONS PER HOUR

T01	GALLONS PER DAY OR LITERS PER DAY
T02	GALLONS PER DAY OR LITERS PER DAY
T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
T04	GALLONS PER DAY OR LITERS PER DAY

T04 GALLONS PER DAY OR
LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	M
GALLONS PER DAY	U

UNIT OF MEASURE	UNIT OF MEASURE CODE
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR.	W
GALLONS PER HOUR	E
LITERS PER HOUR	H

UNIT OF MEASURE	UNIT OF MEASURE CODE
ACRE-FOOT	A
HECTARE-METER	B
ACRES	C
HECTARES	D

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

DUP		TIA	C
			1
13	14	15	

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY			FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)					1. AMOUNT	2. UNIT OF MEASURE (enter code)		
X-1	S A 2	600	G		5						
X-2	T O 3	20	E		6						
1	S O 1	335,175	G		7						
2	S O 2	698,300	G		8						
3	T O 4	1,500,000	U		9						
4	T O 4	129,600 5,400	E		10						

PROCESSES (continued)

SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

T04 - Pretreatment Facility

This plant has a pretreatment waste treatment facility which removes 88% to 96% of the BOD, solids, fats, oils and greases from the plant waste water before discharging into the Kankakee municipal sewer system. This pretreatment facility is operated to maintain a waste effluent into the municipal sewers with loadings below 400 MG/L of BOD's, 450 MG/L of suspended solids and 50 MG/L of FOG. This facility consists of primary treatment, secondary treatment (two aerated lagoons), clarification and sludge dewatering using a belt filter press. The system effluent is pumped to the Kankakee sewer system through a lift station. The capacity of this system is 1,500,000 gal./day.

T04 - Thermal Process

Waste oil is burned in two process/heating steam boilers as a fuel. Total capacity of waste oil is 5400 gallons per hour. This is burned simultaneously with natural gas.

DESCRIPTION OF HAZARDOUS WASTES

EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS.....	P	KILOGRAMS.....	K
TONS.....	T	METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Notes: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

SAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pound per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two waste are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimate 20 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K 0 5 4	900	P	T 0 3 D 8 0	
X-2	D 0 0 2	400	P	T 0 3 D 8 0	
X-3	D 0 0 1	100	P	T 0 3 D 8 0	
X-4	D 0 0 2				included with above

Do not photocopy this page before completing it you have more than 26 wastes to list

EPA I.D. NUMBER (enter from page 1)										FOR OFFICIAL USE ONLY									
140005215767										<div style="display: flex; justify-content: space-between;"> <div> W DUP </div> <div> T/A C 2 DUP </div> </div>									

V. DESCRIPTION OF HAZARDOUS WASTES (continued)

1. Z	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
1	U 0 0 8	50	P	T 0 4 S 0 1	
2	U 0 3 1	4,000	P	T 0 4 S 0 1	
3	P 0 5 3	3,000	P	T 0 4 S 0 1	DW
4	U 1 5 9	50	P	T 0 4 S 0 1	
5	U 1 6 2	3,000	P	T 0 4 S 0 1	
6	U 1 5 4	4,000	P	T 0 4 S 0 1	
7	U 2 2 0	1,000	P	T 0 4 S 0 1	
8	U 2 3 9	3,000	P	T 0 4 S 0 1	
9	U 0 0 9	6,600	P	T 0 4 S 0 1	
10	U 0 7 7	10,000	P	T 0 4 S 0 1	
11	U 0 0 2	10,000	P	T 0 4 S 0 1	
12	U 0 4 4	10,000	P	T 0 4 S 0 1	
13	U 2 2 3	50	P	T 0 4 S 0 1	
14	U 1 2 2	2,000	P	T 0 4 S 0 1	
15	U 1 1 3	100	P	T 0 4 S 0 1	
16	U 0 8 0	100	P	T 0 4 S 0 1	
17	U 1 6 1	50	P	T 0 4 S 0 1	
18	U 1 1 7	1,000	P	T 0 4 S 0 1	
19	U 0 0 3	40	P	T 0 4 S 0 1	
20	U 0 1 2	50	P	T 0 4 S 0 1	
21	U 0 5 2	380	P	T 0 4 S 0 1	
22	U 0 5 6	20	P	T 0 4 S 0 1	
23	U 1 1 2	90	P	T 0 4 S 0 1	
24	U 1 6 9	3,200	P	S 0 1 T 0 4	
25	U 1 6 5	30	P	T 0 4 S 0 1	
26	U 1 9 6	490	P	T 0 4 S 0 1	

DESCRIPTION OF HAZARDOUS WASTES (continued)

USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. (enter from page 1)

I L D 0 0 5 2 1 5 7 6 7

T/A C
6

FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

L 6 H 155

I. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

F 6 A / 50

II. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

41 05 18

LONGITUDE (degrees, minutes, & seconds)

87 52 50

III. FACILITY OWNER

☒ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

X. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

L. L. Adler
V. P. Engr. & Mfr.

B. SIGNATURE



C. DATE SIGNED

11/17/80

Y. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

104.76 ACRES

2725.80'

(88.53 ACRES)

26.15 ACRES
PERMANENT
6031.20'

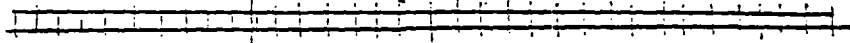
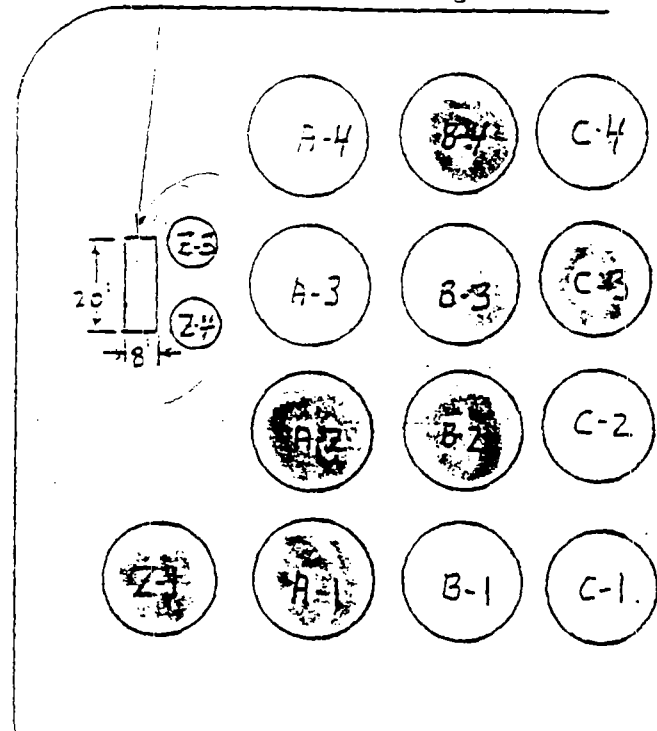
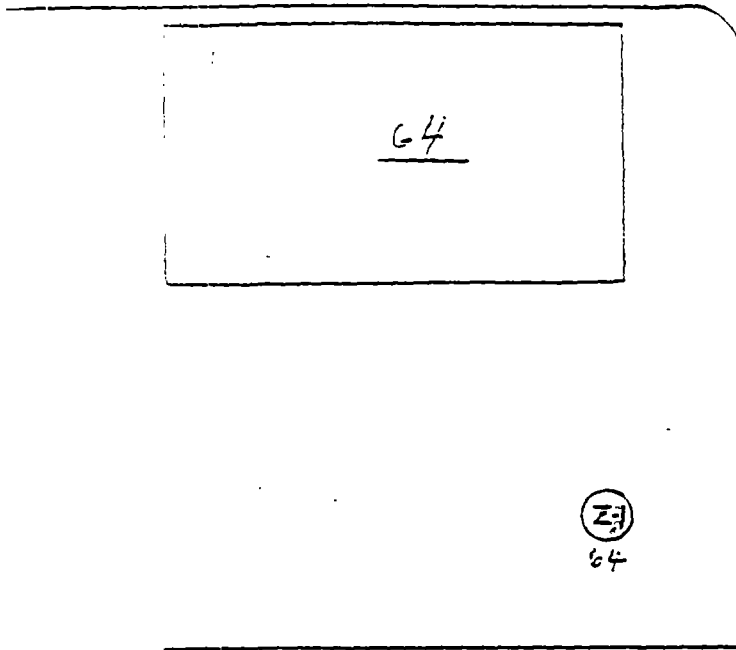
ITEM V
Page 1 of 4

Scale: 1 inch = 400 feet

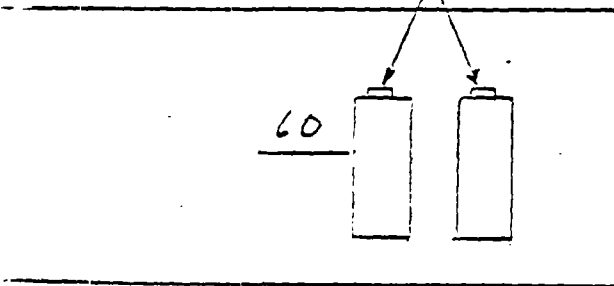
2483.15'

Page 2 of 4 .

181



Boilers for Waste Oil



STORAGE TANKS

Z-1	64Z-1
Z-3	C-3
Z-4	C-4
A-1	
A-2	
B-2	
B-3	
B-4	

Scale 1 inch = 40 feet

LEGEND

1. Drum Storage, 10' x 10' *by 5'*
2. Drum Storage, 30' x 30' *from main building - separate on*
3. Storage Tank, 10' diameter *water tank in lower part of area*
4. Drum Storage, 17' x 90' *rel. part in series to easy service waste*
5. Drum Storage, 33' x 35' *SEP*
6. Drum Storage, 10' x 50' *high capacity - storage tank*
7. Drum Storage, 8' x 45' *1 unit from main building*
8. Pretreatment Facility
 - a. Area 64, Primary Pit and Belt Filter, 50' x 90'
 - b. 1st Lagoon, 90' x 120' *1st lagoon - 1st stage*
 - c. 3rd Lagoon, 110' x 290'
 - d. Final Clarifier, 55' diameter
9. Drum Storage, 100' x 200'
10. Past 2nd Lagoon, 85' x 110' *650,000 gpm*
11. Storage Tank, 5' diameter *used for = 1st stage of 2nd lagoon*

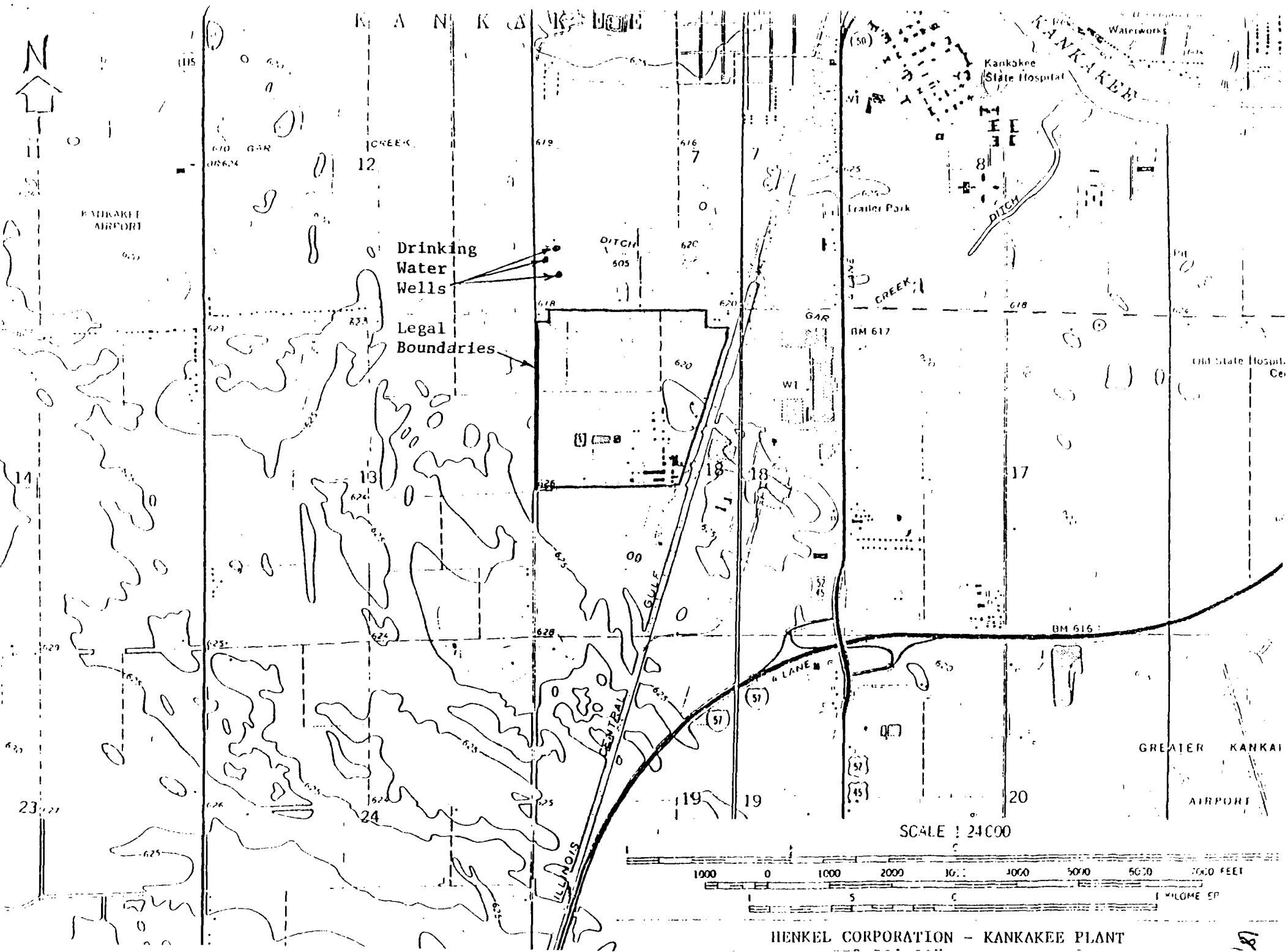
ITEM X

Solid Waste Disposal Permits - Authorization Numbers, Illinois

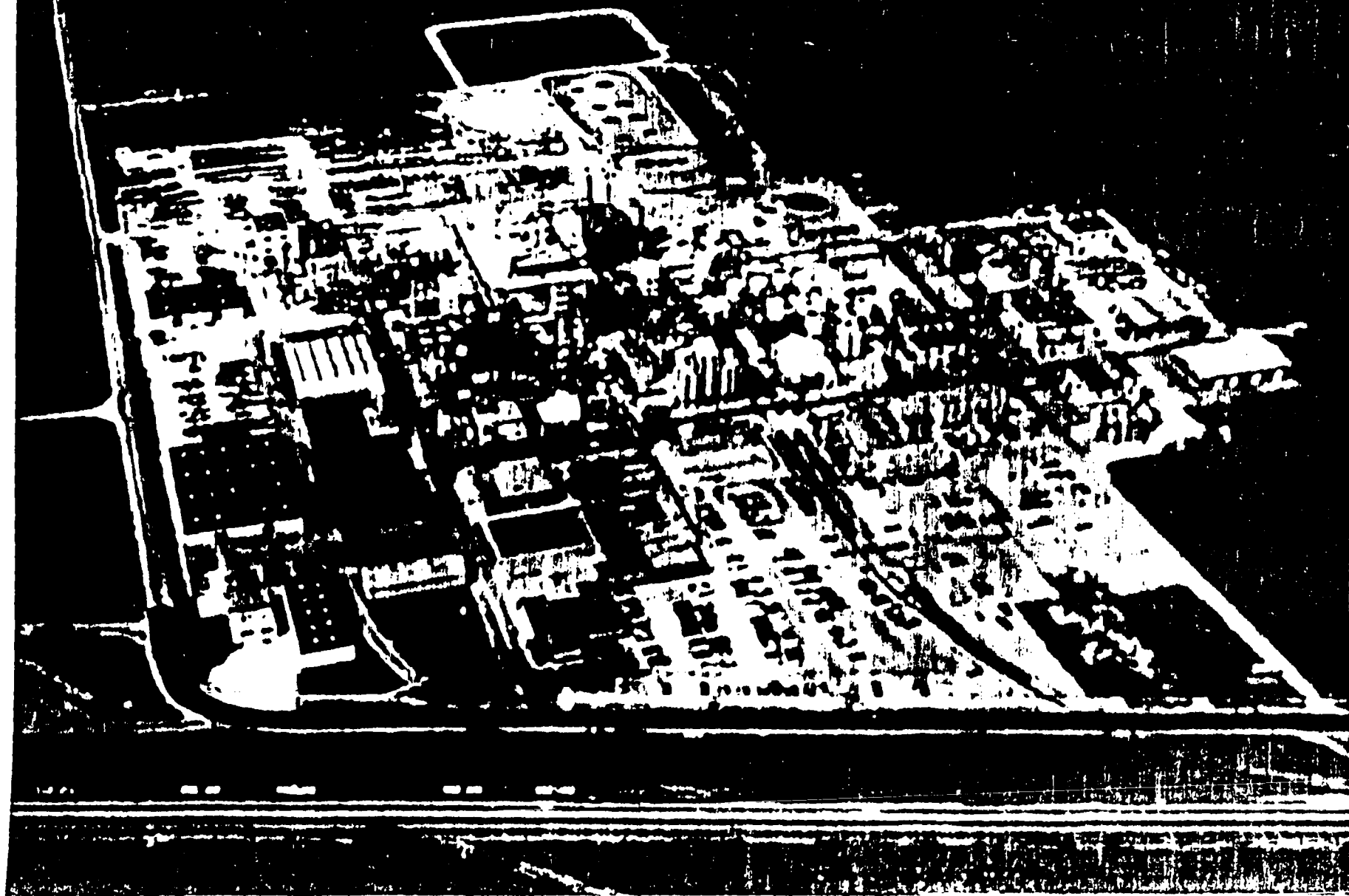
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 791144
 802196
 792718
 802192
 791849
 782138
 800238
 780706
 997147
 791682
 792577

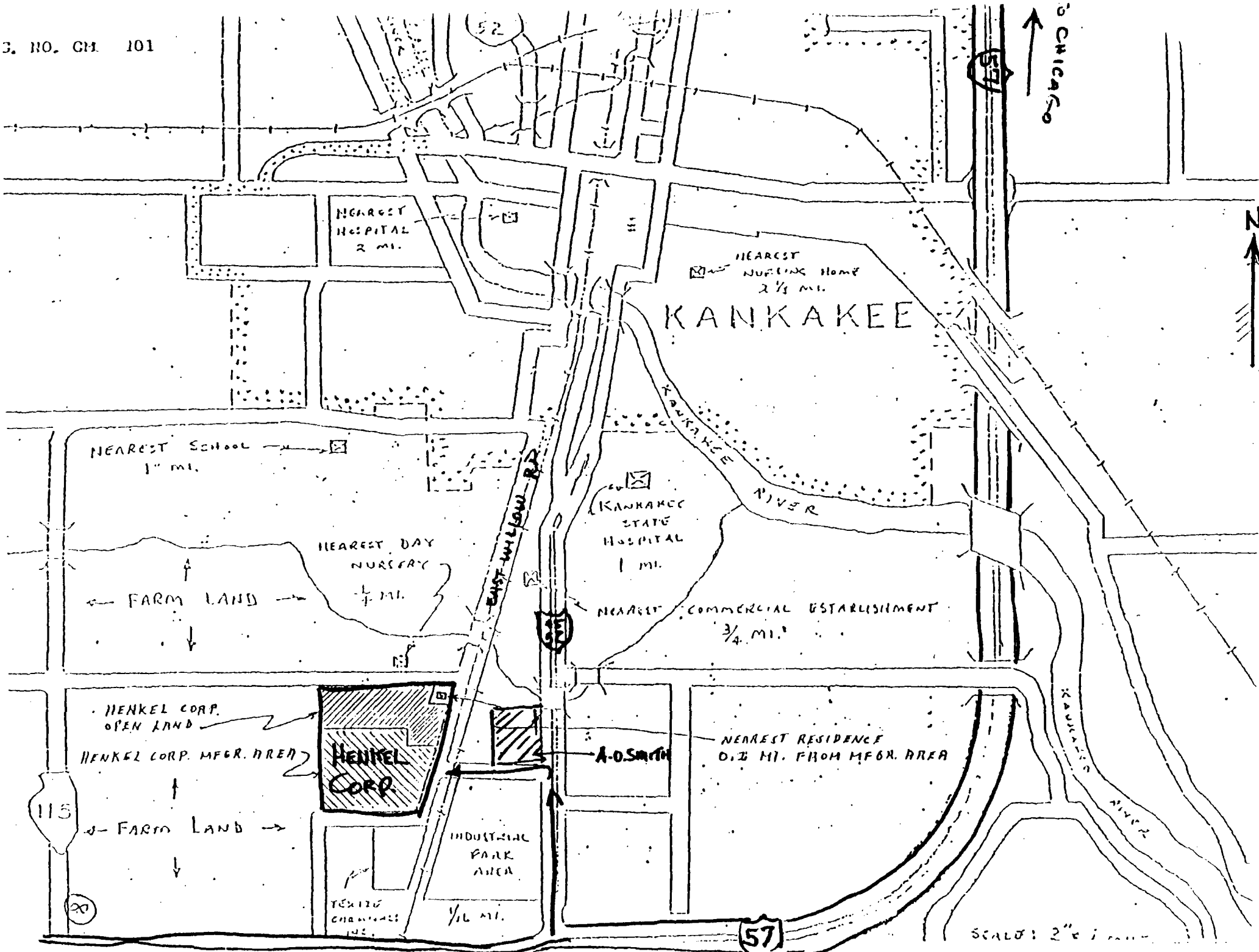
Operating Permits - Emission Sources, Illinois

72111327	03080073	08050031	03060207	09060037
02111020	72100302	75080041	09060028	09060030
02111073	09020006	02100303	09060035	09060032
02111326	02090353	09050014	09060027	09060034
73010457	02090385	09050018	02090352	09060031
03010530	73010530	03060208	09060039	09060033
09060036	09060056	09060052	09060055	09060054
09060053	09060066	09060065	09060067	09060064
09060068	09060004	80060044	02090386	02100306
02100218	02100217	02100307	02100308	02100309
02100310	-02111328	8003058		



HENKEL CORPORATION - KANKAKEE PLANT







Henkel Corporation

South Kensington Road
Kankakee, IL 60901
815 932-6751

July 22, 1982

REFERENCE NUMBER 2

Mr. Patrick Giordano
Illinois Environmental Protection Agency
Division of Land Pollution Control
Compliance Assurance Section
2200 Churchill Road
Springfield, Illinois 62706

RE: IEPA Site No. 09105507
USEPA No. 1LD005215769

Dear Mr. Giordano:

In accordance with our telephone conversation of this date, I am changing our IEPA site number to that as indicated above. I am also enclosing the information that we have on the monitor well borings. In addition, a copy of the plot plan showing the well locations is also enclosed.

Yours truly,

Frank H. Beberdick
Engineer

Enc:

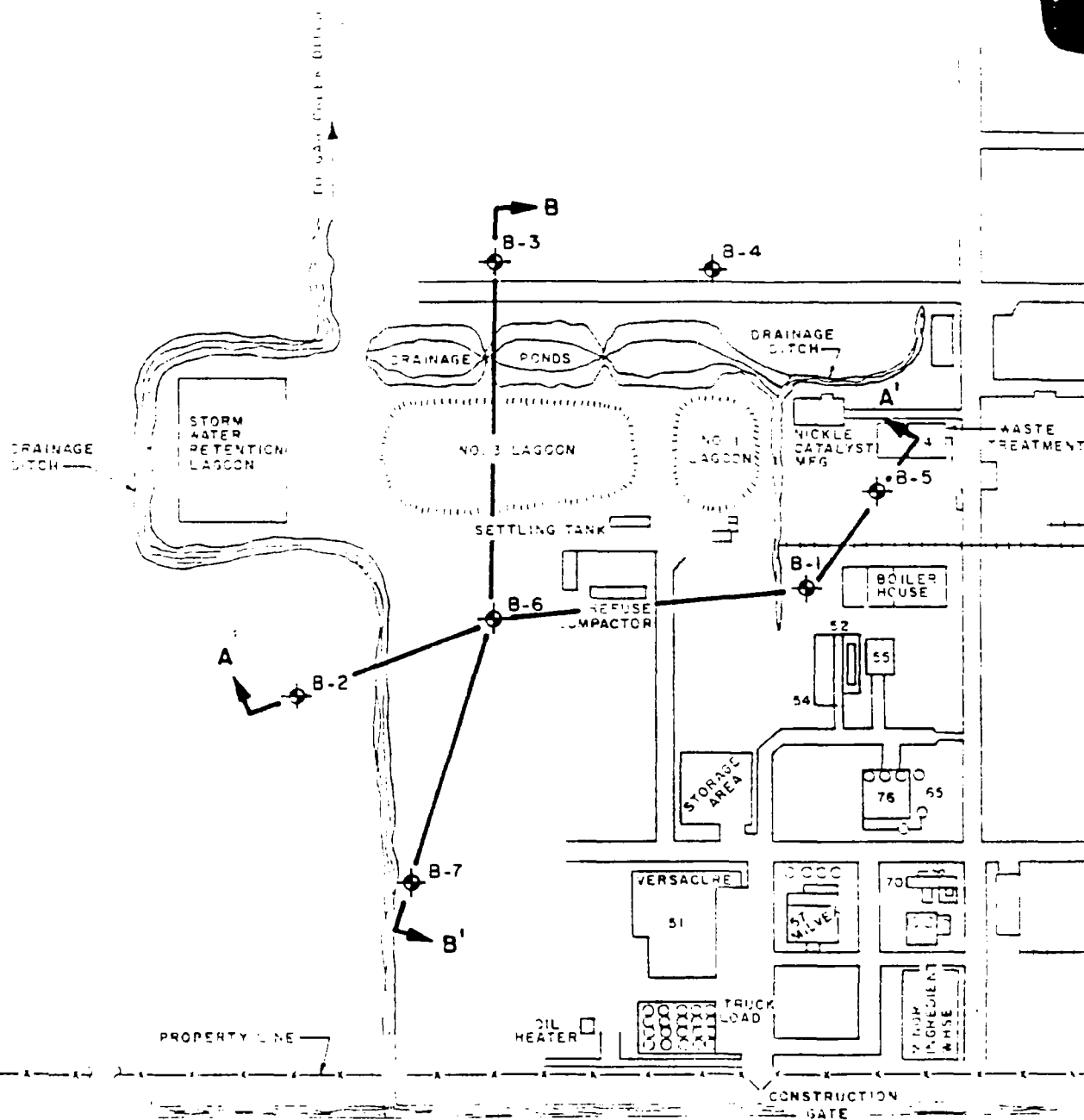
CC: Mr. James Brossman
USEPA Region V

FHB/mf

09105507
KANKAKEE / HENKEL
RF

JUL 23 1982

STATE OF ILLINOIS



EXPLANATION:

- B-7 PIEZOMETER LOCATION AND NUMBER
- B' LOCATION OF GEOLOGIC CROSS-SECTION

DRAWING REFERENCE:

TITLED: PLOT PLAN
FOR: HENKEL CORPORATION
MINNEAPOLIS, MINNESOTA
BY: HENKEL CORPORATION
KANKAKEE, ILLINOIS
DRAWING NO.: PL-1263-2
DATE: 8-14-81 (REV. 1)

RECEIVED
JUL 23 1982

BY: D.L.P.C.
OF ILLINOIS

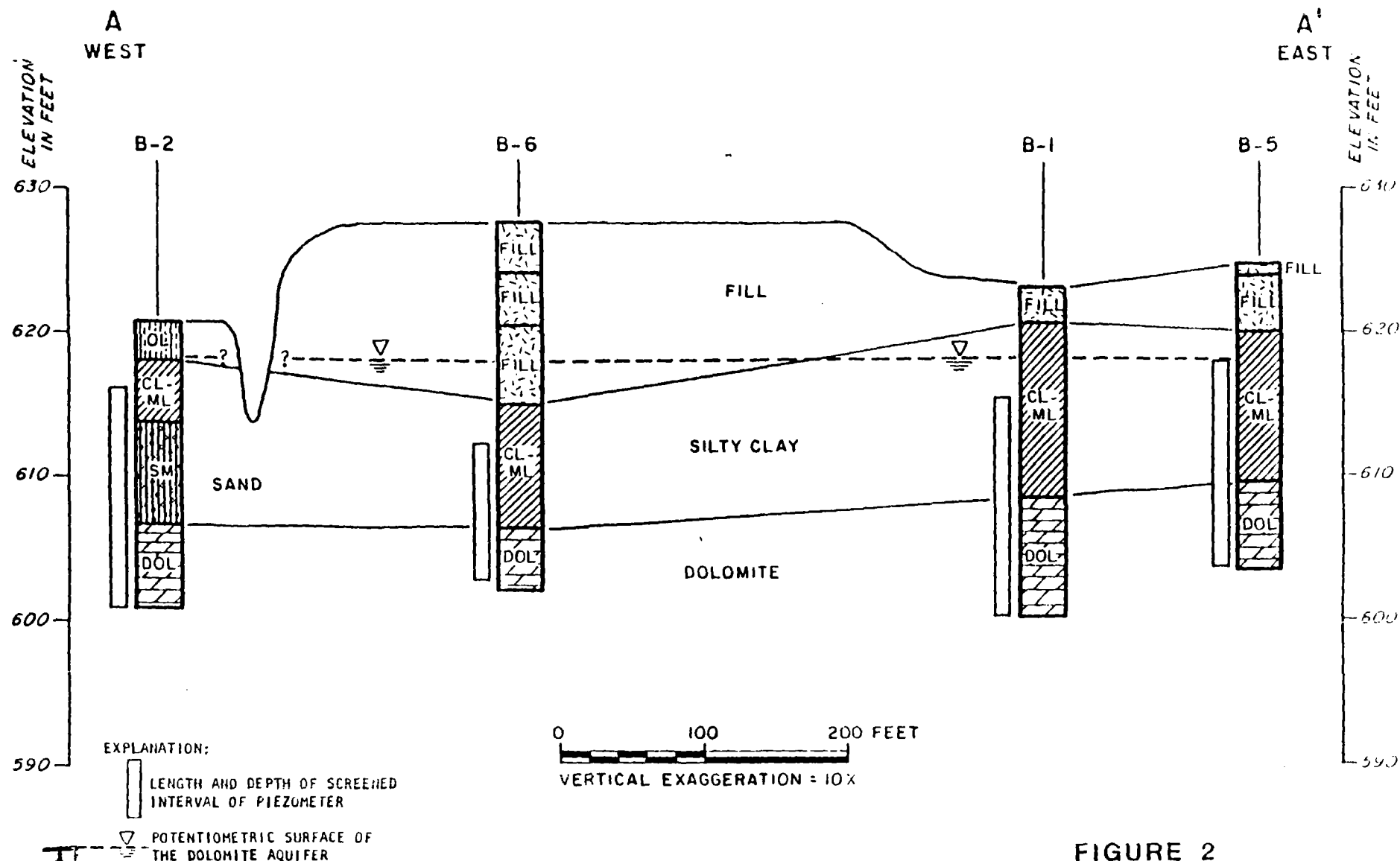
FIGURE 1

PLOT PLAN AND
PIEZOMETER LOCATION MAP
HENKEL CORPORATION
KANKAKEE PLANT

Dames & Moore

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- NOTES:**
1. GEOLOGIC CROSS-SECTIONS ARE INTERPRETED FROM WIDELY SPACED BORINGS. CONDITIONS BETWEEN BORINGS MAY DIFFER FROM THAT SHOWN.
 2. SEE FIGURE 1 FOR LOCATION OF GEOLOGIC CROSS-SECTION.
 3. FOR DEFINITION OF SOIL TYPES, SEE FIGURE A-1, UNIFIED SOIL CLASSIFICATION SYSTEM.

FIGURE 2

GEOLOGIC CROSS-SECTION A-A'

HENKEL CORPORATION

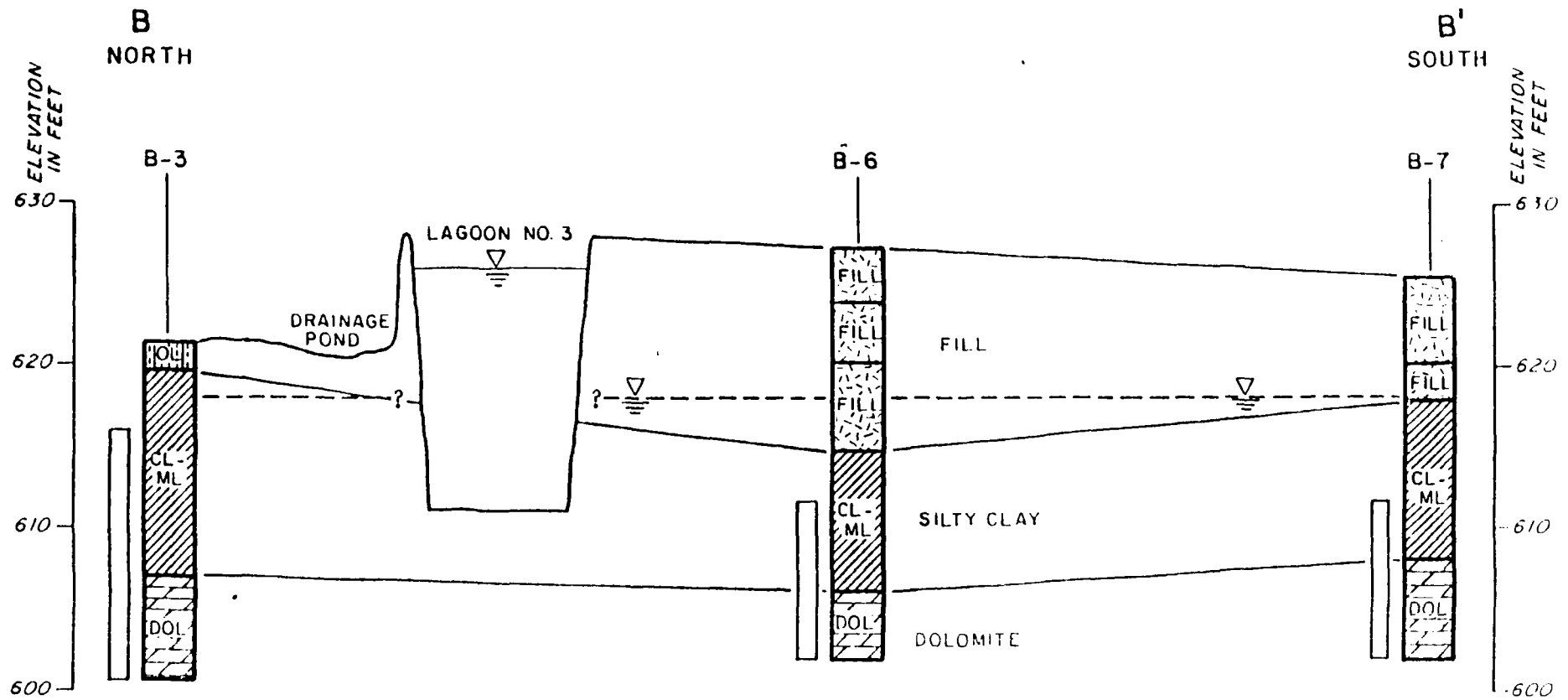
KANKAKEE PLANT

Dames & Moore

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STATE OF ILLINOIS



EXPLANATION:

- LENGTH AND DEPTH OF SCREENED INTERVAL OF PIEZOMETER
 POTENTIOMETRIC SURFACE OF THE DOLOMITE AQUIFER

- NOTES: 1. GEOLOGIC CROSS-SECTIONS ARE INTERPRETED FROM WIDELY SPACED BORINGS. CONDITIONS BETWEEN BORINGS MAY DIFFER FROM THAT SHOWN.
 2. SEE FIGURE 1 FOR LOCATION OF GEOLOGIC CROSS-SECTION.
 3. FOR DEFINITION OF SOIL TYPES, SEE FIGURE A-1, UNIFIED SOIL CLASSIFICATION SYSTEM.

FIGURE 3
 GEOLOGIC CROSS-SECTION B-B'
 HENKEL CORPORATION
 KANKAKEE PLANT

Dames & Moore

JUL 23 1982

TABLE 1
CONSTRUCTION DETAILS OF INSTALLED PIEZOMETERS

PIEZOMETER	INSTALLATION DATE	SCREENED INTERVAL (ft below land surface)	EFFECTIVE INTERVAL (ft below land surface)	LAND SURFACE ELEVATION (ft above MSL)	ELEVATION - TOP OF PVC PIPE (ft above MSL)	GEOLOGIC MATERIALS
B-1	10/14/81	7.8 - 22.8	5.8 - 22.8	623.3	625.90	Silty clay & dolomite
B-2	10/13/81	4.8 - 19.8	3.8 - 19.8	620.6	622.91	Silty sand & dolomite
B-3	10/13/81	5.3 - 20.3	4.3 - 20.3	621.3	623.79	Silty clay & dolomite
B-4	10/13/81	6.5 - 21.5	5.6 - 21.5	623.2	626.15	Silty clay & dolomite
B-5	11/02/81	6.7 - 21.2	5.5 - 21.5	624.7	626.74	Silty clay & dolomite
B-6	11/03/81	15.5 - 25.0	14.5 - 25.0	627.8	630.32	Silty clay & dolomite
B-7	11/03/81	13.5 - 23.0	10.0 - 23.0	625.5	627.79	Silty clay & dolomite

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U.S.A. - U.S.A.
STATE OF ILLINOIS

TABLE 3
SUMMARY OF FIELD PERMEABILITY TESTS

PIEZOMETER	HYDRAULIC CONDUCTIVITY (permeability) (cm/s)	SCREENED INTERVAL (ft below land surface)	GEOLOGIC MATERIAL
B-1	1.2×10^{-3}	7.8 - 22.8	Silty clay & dolomite
B-2	2.3×10^{-3}	4.8 - 19.8	Silty sand & dolomite
B-3	2.8×10^{-3}	5.3 - 20.3	Silty clay & dolomite
B-4	2.8×10^{-3}	6.5 - 21.5	Silty clay & dolomite
B-5	4.2×10^{-4}	6.7 - 21.2	Silty clay & dolomite
B-6	1.4×10^{-4}	15.5 - 25.0	Silty clay & dolomite
B-7	2.0×10^{-3}	13.5 - 23.0	Silty clay & dolomite

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E.P.A. - D.L.P.C.
STATE OF ILLINOIS

APPENDIX

INVESTIGATIVE METHODOLOGIES

DRILLING

The subsurface hydrogeologic conditions at the site were investigated by drilling 7 exploratory borings ranging in depth from 19.8 to 25.0 feet. All borings extended at least 4 1/2 feet into the dolomite bedrock. Subsequent to drilling, piezometers were installed in each boring.

The test drilling was performed by D&G Drilling, Inc., of New Lenox, Illinois, during two separate phases. Borings B-1 through B-4 were drilled in Phase I during the period October 12 through October 14, 1981. Borings B-5 through B-7 were installed in Phase II during the period November 11 through November 12, 1981. Drilling was accomplished by utilizing a truck-mounted rig and continuous flight augers, rotary wash, and NX rock coring techniques.

Soil samples were taken at intervals not exceeding 5 feet with the standard split spoon sampler as well as with the Dames & Moore type "U" sampler (Figure A-4). Selected samples were tested at the Dames & Moore soils lab to aid in classification of the soil (see Key to Logs of Borings and Logs of Borings, Figure A-2.1 through Figure A-2.4).

Continuous rock-coring was done at the first 4 borings to provide representative samples of the stratigraphic and physical characteristics of the bedrock underlying the site.

PIEZOMETER INSTALLATION

Seven piezometers were installed during the present field operations. Piezometer installations consisted of 2-inch diameter Schedule 80 PVC pipe

with 0.010 slot screen, 10 to 15 feet in length. Screens were placed within the upper bedrock and into the overlying glacial deposits. Sand or gravel was packed around each screen to a level 1 to 5 feet above the screen. A thin, 1- to 3-foot layer of fine sand was placed above the sand or gravel to prevent downward migration of bentonite or grout into the gravel pack. Bentonite pellets were dropped to form a 1- to 2-foot seal to prevent water seepage from overlying strata. The remaining annulus was filled with a cement-bentonite grout to the surface. A 5-foot section of 6 inch protective steel casing was placed over the piezometer for protection. Each piezometer installation is illustrated on the Logs of Borings (Figures A-2.1 through A-2.4).

Piezometers were developed by using a surface centrifugal pump and a hand bailer.

FIELD PERMEABILITY TESTS

Rising head field permeability tests were performed in the piezometers installed during the present study. The test procedure consisted of bailing a known quantity of water from the piezometer and monitoring the rate of recovery of the water level. All hydraulic conductivities (permeabilities) were calculated using the analytic method of Hvorslev (1951).

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STATE OF ILLINOIS

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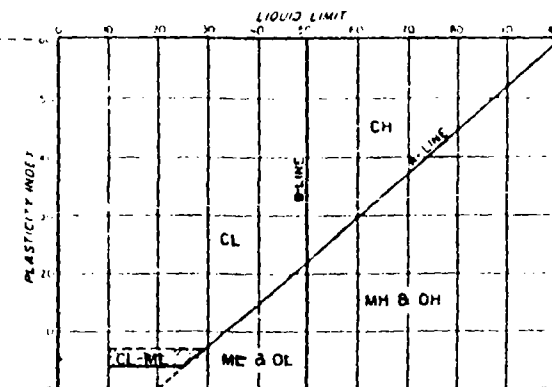
MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (1. FILL UP NO FINES)		GW	WELL-SORTED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-SORTED GRAVELS, GRAVEL SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPROXIMATE AMOUNT OF FINES)		GM	SILT, GRAVELS, GRAVEL-SAND, SILT MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-SORTED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-SORTED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPROXIMATE AMOUNT OF FINES)		SM	SILT, SANDS, SAND SILT MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SAND, ROCK FLOUR, SILT, OR CLAYEY FINE SANDS OR SILTY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	INORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	ORGANIC SILTS, INORGANIC OR ORGANIC SILTY SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

SOIL CLASSIFICATION CHART

MATERIAL SIZE	PARTICLE SIZE			
	LOWER LIMIT		UPPER LIMIT	
	MILLIMETERS	SEIVE SIZE	MILLIMETERS	SEIVE SIZE
SAND				
	FINE	Nº 60	0.425	Nº 40
	MEDIUM	Nº 30	0.600	Nº 25
GRAVEL				
	FINE	Nº 20	0.850	Nº 10
	COARSE	Nº 10	2.000	Nº 10
COBBLES			75.0	3"
BOULDERS			300.0	36"

U.S. STANDARD CLEAN SO. AND DRILLINGS

GRADATION CHART



PLASTICITY CHART

FIGURE A-1

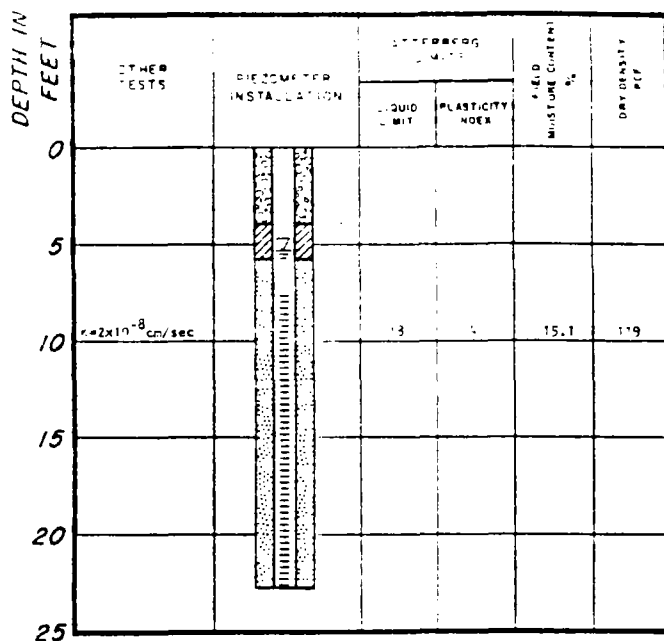
UNIFIED SOIL CLASSIFICATION CHART

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STATE OF ILLINOIS

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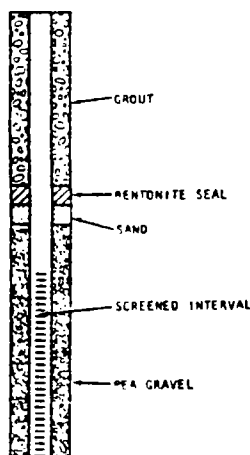
12637-001-07



KEY TO SAMPLES:

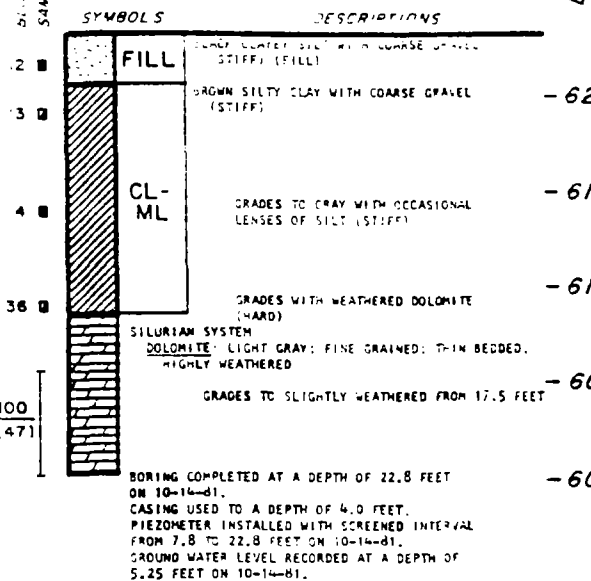
- THE NUMBER OF BLOWS REQUIRED TO DRIVE THE 3.25" O.D. BY 2.42" I.D. DAMES & MOORE TYPE L SAMPLER 12" OR LENGTH INDICATED WITH A 310 POUND HAMMER FALLING 30".
- 24 ■ DEPTH OF RELATIVELY UNDISTURBED SAMPLE OBTAINED WITH THE DAMES & MOORE SAMPLER.
- DEPTH OF DISTURBED SAMPLE OBTAINED WITH THE DAMES & MOORE SAMPLER.
- DEPTH OF SAMPLING ATTEMPT WITH NO RECOVERY USING THE DAMES & MOORE SAMPLER.
- THE NUMBER OF BLOWS REQUIRED TO DRIVE THE 2.0" O.D. BY 1.4" I.D. STANDARD SPLIT SPOON SAMPLER 12" OR LENGTH INDICATED WITH A 140 POUND HAMMER FALLING 30".
- 61 ■ DEPTH OF DISTURBED SAMPLE OBTAINED WITH THE SPLIT SPOON SAMPLER.
- DEPTH OF SAMPLING ATTEMPT WITH NO RECOVERY USING THE SPLIT SPOON SAMPLER.

DETAILS TO PIEZOMETER INSTALLATION:



BORING B-1

SURFACE ELEVATION 623.3



RECOVERY TERMINOLOGY:

100 (47)	PERCENT RECOVERED INDICATES TOTAL AMOUNT OF CORE RECOVERED FOR EACH RUN, EXPRESSED AS A PERCENTAGE OF THE TOTAL LENGTH OF THE CORE RUN.	
	ROCK QUALITY DESIGNATION (RQD) - A MODIFIED CORE RECOVERY PERCENTAGE IN WHICH ALL PIECES OF SOUND CORE OVER 4 INCHES LONG ARE COUNTED AS RECOVERY. THE MODIFIED SUM OF CORE RECOVERED IS THEN EXPRESSED AS A PERCENTAGE OF THE TOTAL LENGTH OF THE CORE RUN.	
LENGTH OF CORE RUN	PERCENT RQD	ROCK QUALITY TERMS
	0 - 25	VERY POOR
	25 - 50	POOR
	50 - 75	FAIR
	75 - 90	GOOD
	90 - 100	EXCELLENT

WEATHERING TERMINOLOGY:

- FRESH:** THE ROCK SHOWS NO DISCOLORATION, LOSS OF STRENGTH, OR ANY OTHER EFFECT OF WEATHERING.
- SLIGHTLY WEATHERED:** THE ROCK IS SLIGHTLY DISCOLORED, BUT NOT NOTICEABLY LOWER IN STRENGTH THAN THE FRESH ROCK.
- MODERATELY WEATHERED:** THE ROCK IS DISCOLORED AND NOTICEABLY WEAKENED. 2-INCH DIAMETER DRILL CORES CANNOT USUALLY BE BROKEN BY HAND ACROSS THE ROCK FABRIC.
- HIGHLY WEATHERED:** THE ROCK IS USUALLY DISCOLORED AND WEAKENED TO SUCH AN EXTENT THAT 2-INCH DIAMETER CORES CAN BE BROKEN UP BY HAND ACROSS THE ROCK FABRIC. WET STRENGTH USUALLY MUCH LOWER THAN DRY STRENGTH.
- EXTREMELY WEATHERED:** THE ROCK IS DISCOLORED AND IS ENTIRELY CHANGED TO A SOIL, BUT THE ORIGINAL FABRIC OF THE ROCK IS MOSTLY PRESERVED. THE PROPERTIES OF THE SOIL DEPEND UPON THE COMPOSITION AND STRUCTURE OF THE PARENT ROCK.

BEDDING TERMINOLOGY:

AVERAGE BED THICKNESS	TERM
0.001 FOOT	THINLY LAMINATED
0.001 TO 0.01 FOOT	LAMINATED
0.01 TO 0.1 FOOT	THIN BEDDED
0.1 TO 1.0 FOOT	MEDIUM BEDDED
1.0 FOOT	THICK BEDDED

OTHER TESTS:

K = PERMEABILITY IN cm/sec

FIGURE A-2.1
LOG OF BORINGS

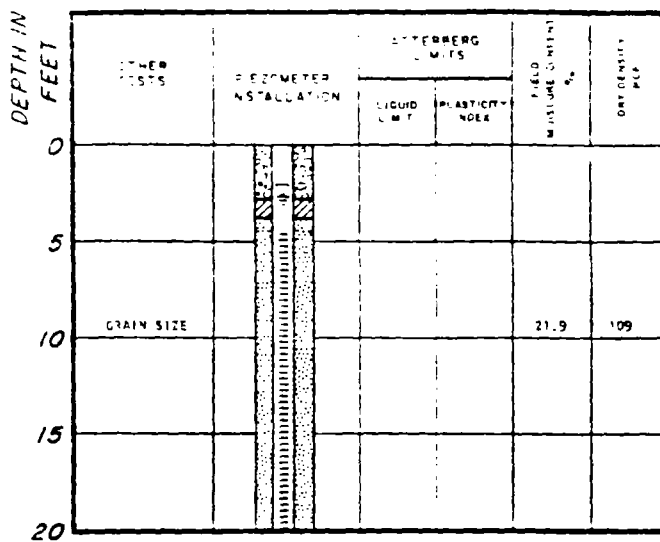
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JUL 23 1982

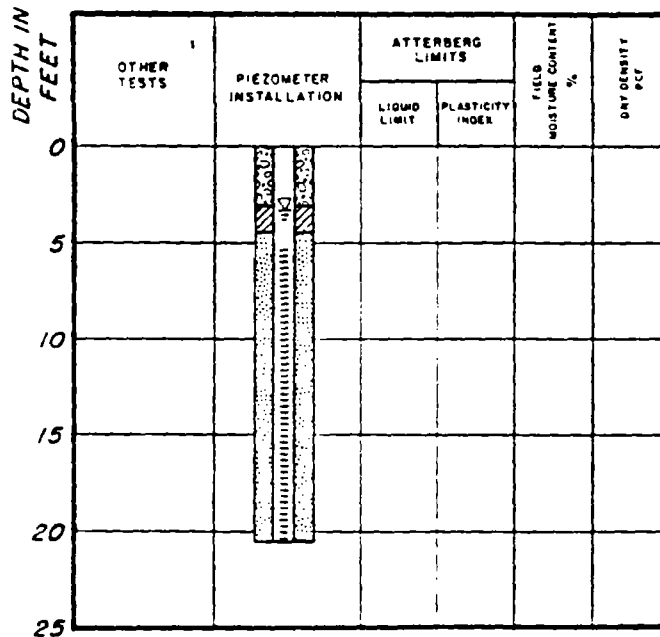
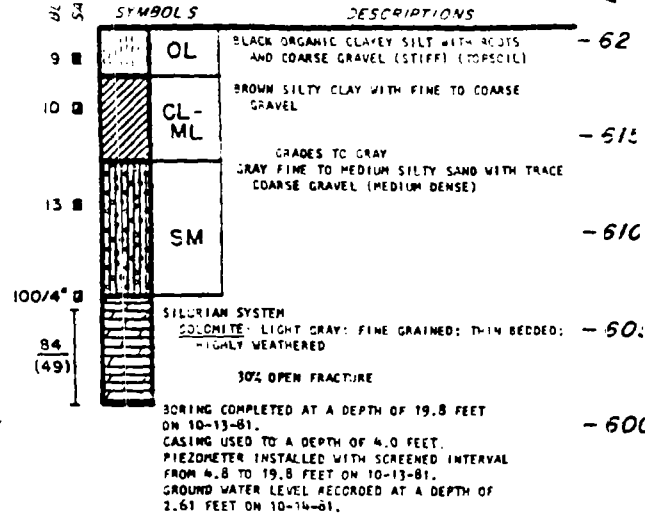
ENR - D.E.P.C.
STATE OF ILLINOIS

Dames & Moore

12637-001-07



BORING B-2 SURFACE ELEVATION 620.6



BORING B-3 SURFACE ELEVATION 621.3

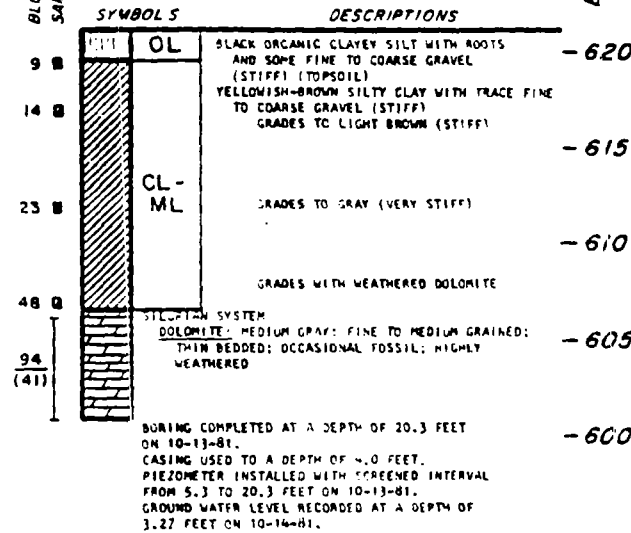


FIGURE A-2.2
LOG OF BORINGS

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E.P.A. - U.S.
STATE OF ILLINOIS

12637-001-07

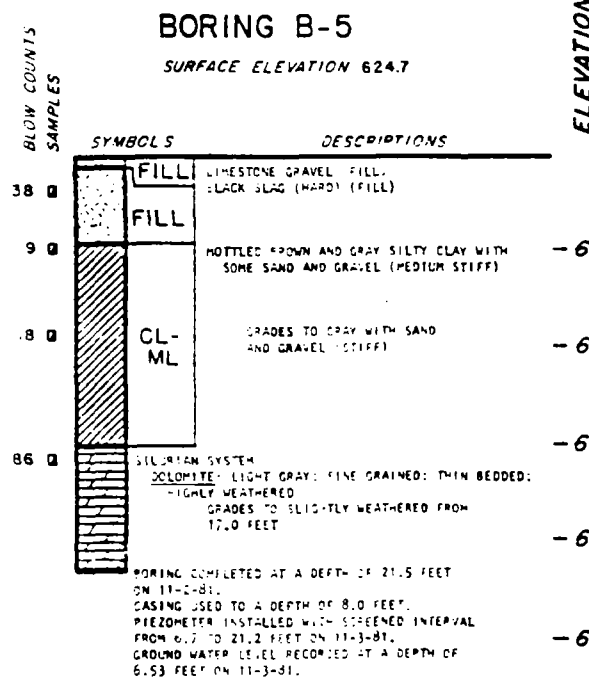
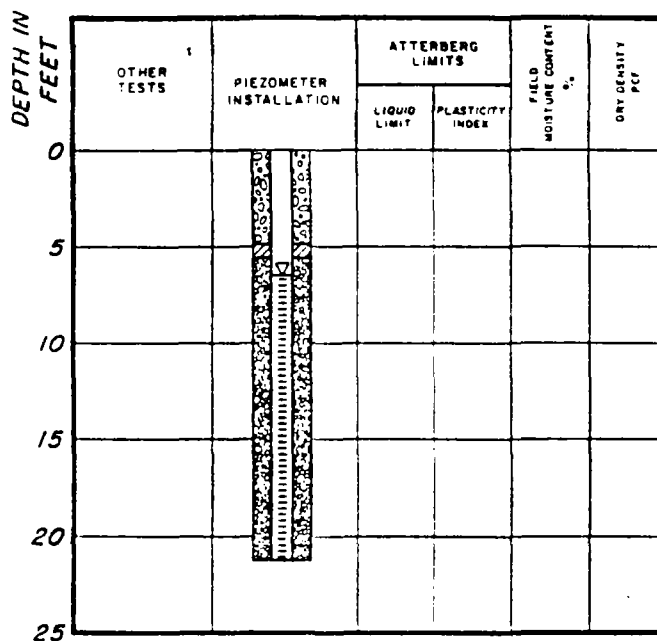
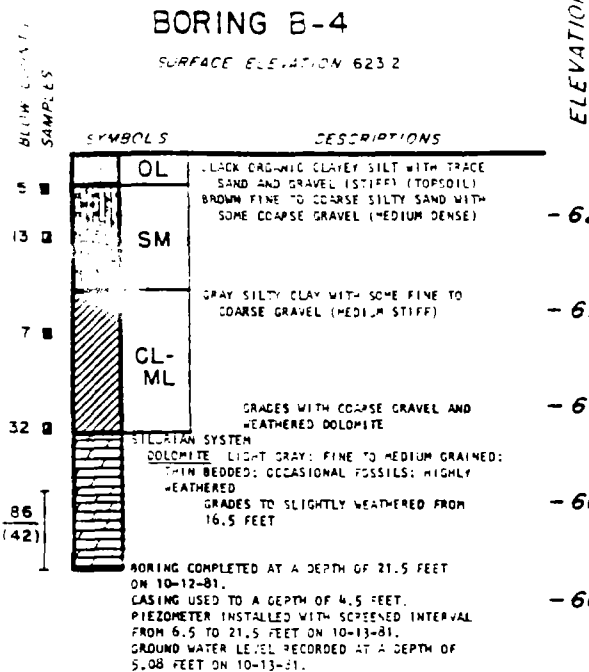
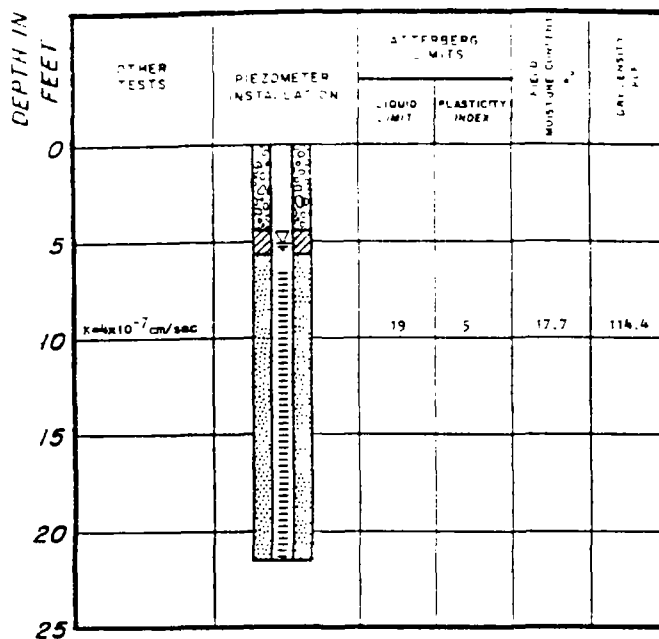
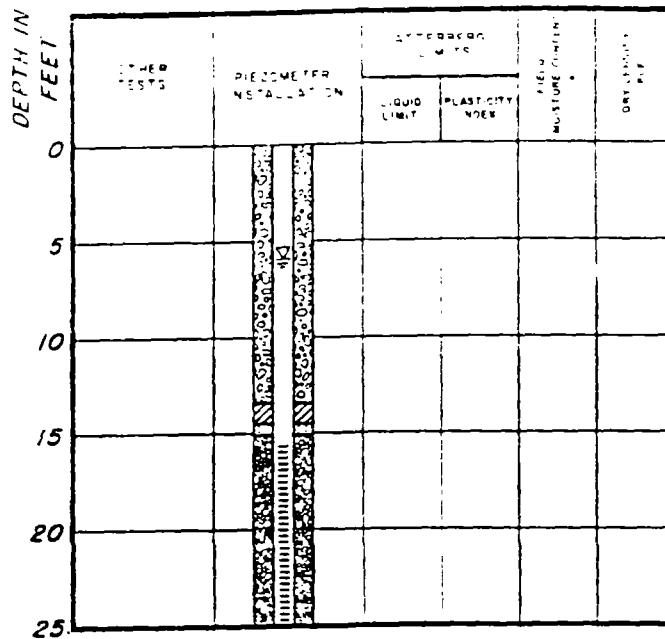


FIGURE A-2.3
LOG OF BORINGS

JUL 23 1982

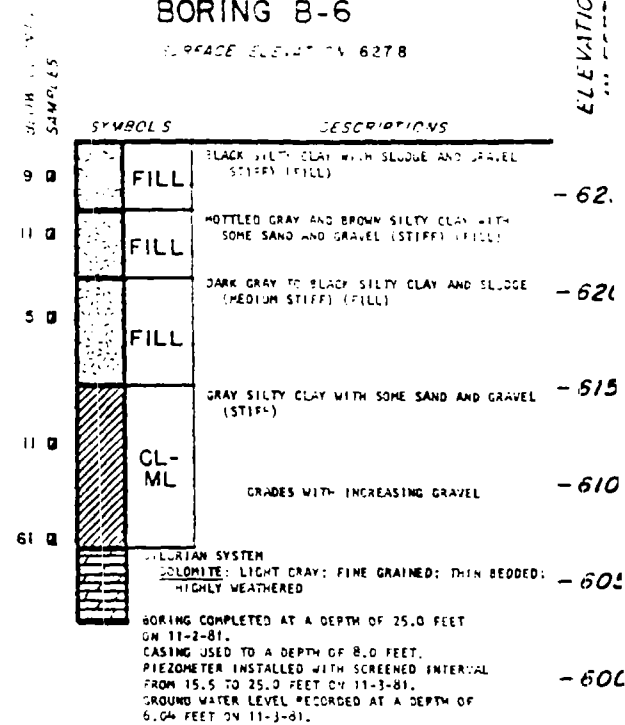
Dames & Moore

12637-001-07



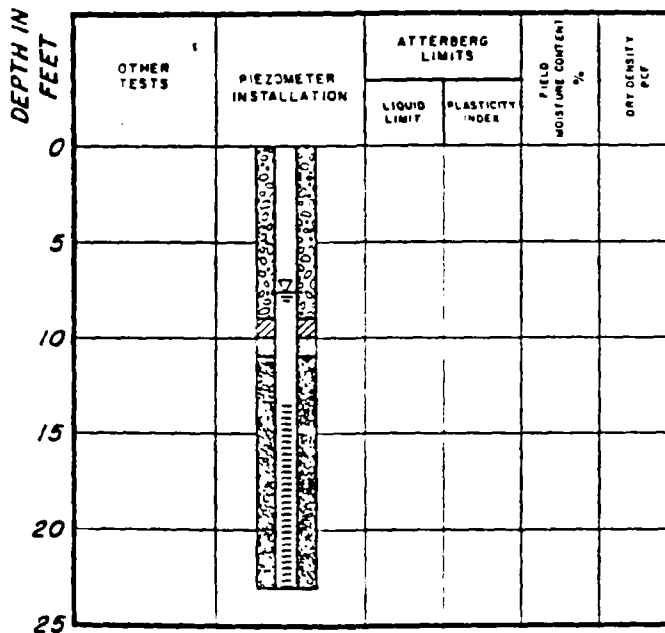
BORING 8-6

SURFACE ELEVATION 627.8



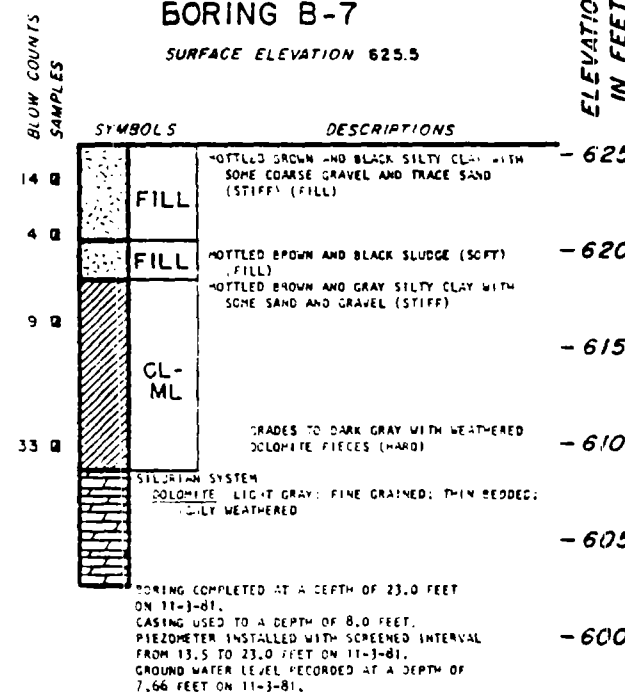
SYMBOLS	DESCRIPTIONS	ELEVATION IN FEET
FILL	BLACK SILTY CLAY WITH SLUDGE AND GRAVEL (STIFF) (FILL)	- 62.0
FILL	MOTTLED GRAY AND BROWN SILTY CLAY WITH SOME SAND AND GRAVEL (STIFF) (FILL)	- 62.0
FILL	DARK GRAY TO BLACK SILTY CLAY AND SLUDGE (MEDIUM STIFF) (FILL)	- 61.5
CL-ML	GRAY SILTY CLAY WITH SOME SAND AND GRAVEL (STIFF)	- 61.0
CL-ML	GRADES WITH INCREASING GRAVEL	- 60.5
CL-ML	SILURIAN SYSTEM DOLOMITE: LIGHT GRAY; FINE GRAINED; THIN BEDDED; HIGHLY WEATHERED	- 60.0

BORING COMPLETED AT A DEPTH OF 25.0 FEET ON 11-2-81.
CASING USED TO A DEPTH OF 8.0 FEET.
PIEZOMETER INSTALLED WITH SCREENED INTERVAL FROM 15.5 TO 25.0 FEET ON 11-3-81.
GROUND WATER LEVEL RECORDED AT A DEPTH OF 6.04 FEET ON 11-3-81.



BORING 8-7

SURFACE ELEVATION 625.5



SYMBOLS	DESCRIPTIONS	ELEVATION IN FEET
FILL	MOTTLED BROWN AND BLACK SILTY CLAY WITH SOME COARSE GRAVEL AND TRACE SAND (STIFF) (FILL)	- 62.5
FILL	MOTTLED BROWN AND BLACK SLUDGE (SOFT) (FILL)	- 62.0
FILL	MOTTLED BROWN AND GRAY SILTY CLAY WITH SOME SAND AND GRAVEL (STIFF)	- 61.5
CL-ML	GRADES TO DARK GRAY WITH WEATHERED DOLOMITE PIECES (HARD)	- 61.0
CL-ML	SILURIAN SYSTEM DOLOMITE: LIGHT GRAY; FINE GRAINED; THIN BEDDED; SLIGHTLY WEATHERED	- 60.5

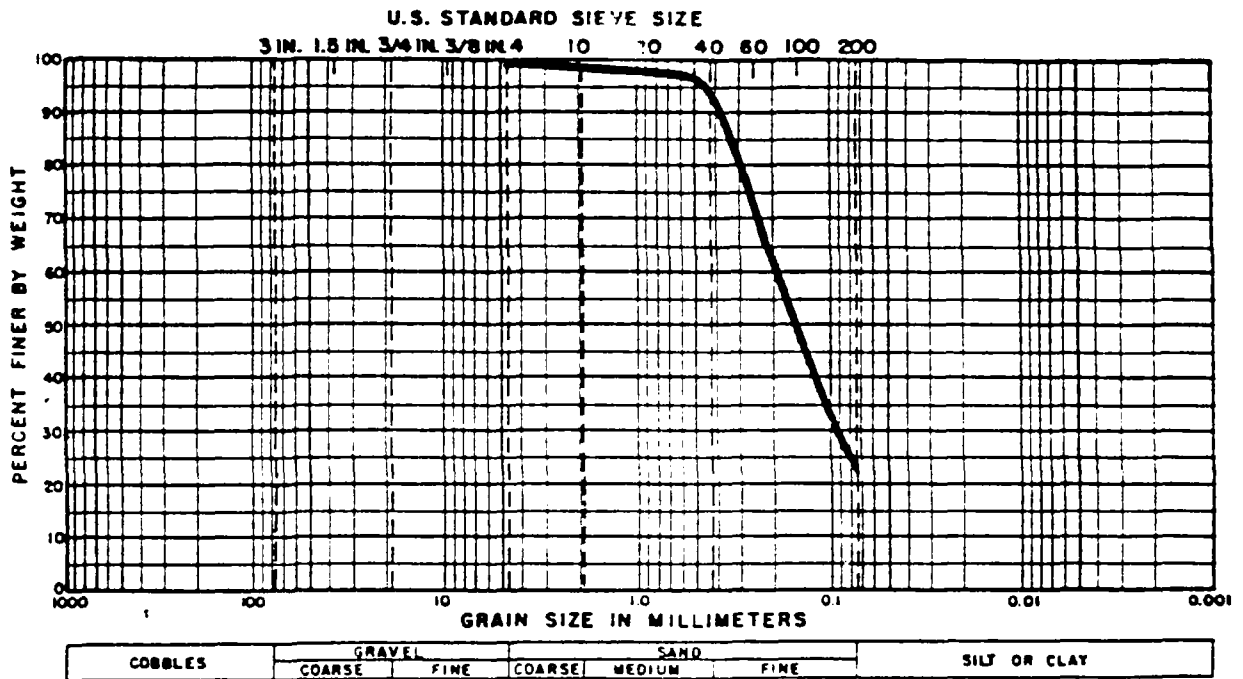
BORING COMPLETED AT A DEPTH OF 23.0 FEET ON 11-3-81.
CASING USED TO A DEPTH OF 8.0 FEET.
PIEZOMETER INSTALLED WITH SCREENED INTERVAL FROM 13.5 TO 23.0 FEET ON 11-3-81.
GROUND WATER LEVEL RECORDED AT A DEPTH OF 7.66 FEET ON 11-3-81.

FIGURE A-2.4
LOG OF BORINGS

JUL 23 1982

U.S.A. - U.S. OF ILLINOIS

Dames & Moore



BORING NO.: B-2 SAMPLE NO.: 3

BORING NO.: B-2 SAMPLE NO.: 3

DEPTH: 9.0 FEET

MOISTURE CONTENT: 21.9%

CLASSIFICATION: SM

DESCRIPTION: GRAY FINE TO MEDIUM
SILTY SAND WITH TRACE COARSE GRAVEL
(MEDIUM DENSE)

12637-001-07

RECEIVED

JUL 23 1982

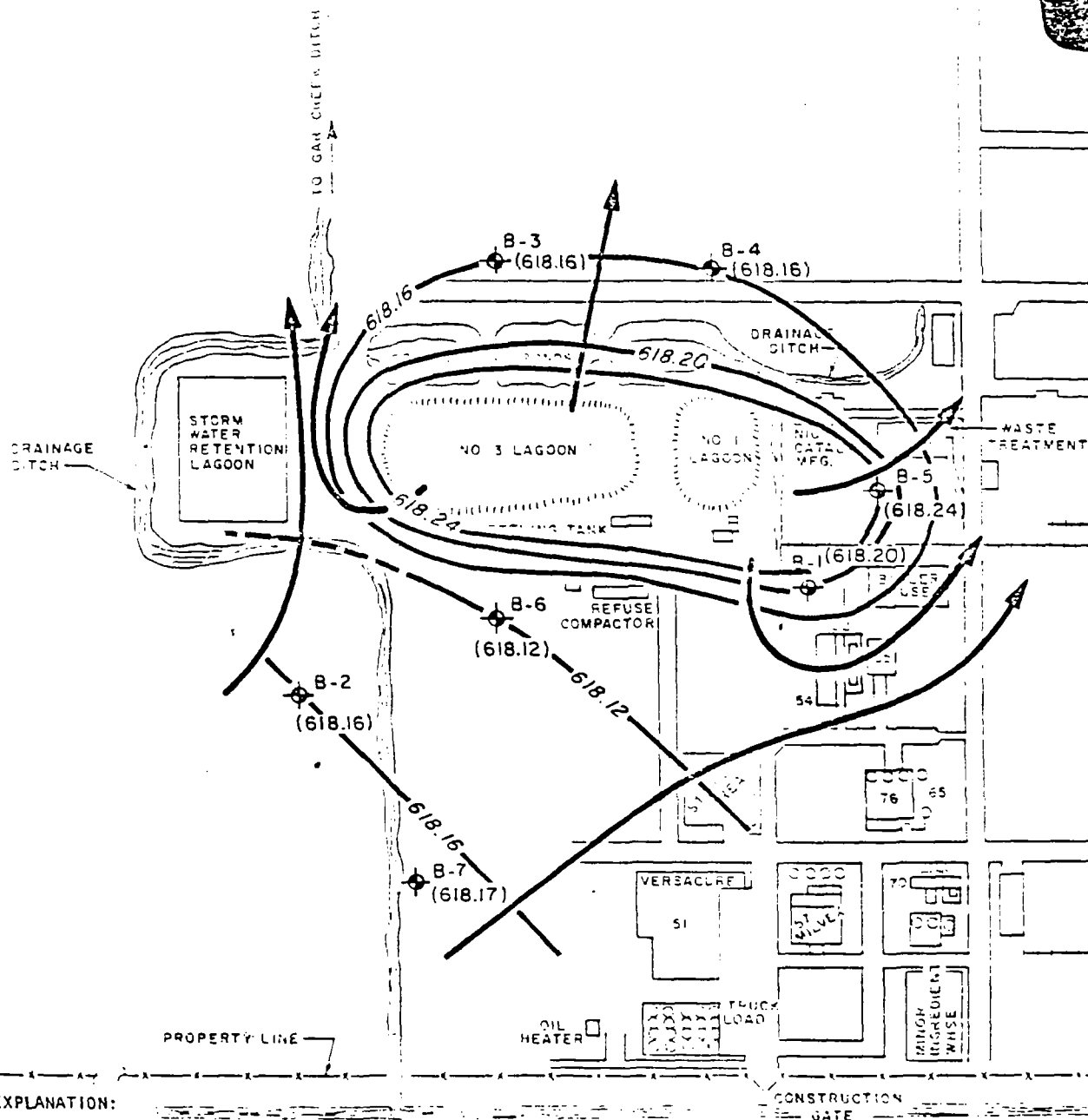
E.P.A. - D.E.P.
STATE OF ILLINOIS

FIGURE A-3
GRAIN SIZE ANALYSIS

Dames & Moore

TABLE 2
MONITOR WELL DATA
HENKEL CORPORATION
KANKAKEE, ILLINOIS

Well Designation	Up-gradient Well	Down-gradient Wells		
	B-7	B-3	B-4	B-5
Date Installed	11/03/81	10/13/81	10/13/81	11/02/81
Well Diameter (in.)	2.0	2.0	2.0	2.0
Screen Slot Size (in.)	0.010	0.010	0.010	0.010
Ground Elevation (ft., msl)	625.5	621.3	623.2	624.7
Top of PVC Casing Elevation (ft., msl)	627.79	623.79	626.15	626.74
Screen Zone Elevations (ft., msl)				
Top	612.0	616.0	616.7	618.0
Bottom	602.5	601.0	601.7	603.5
Screen Zone Depths (ft., below ground level)				
Top	13.5	5.3	6.5	6.7
Bottom	23.0	20.3	21.5	21.2



EXPLANATION:

- B-7 (618.17) PIEZOMETER LOCATION AND NUMBER
- GROUND WATER ELEVATION (FEET ABOVE MSL, RECORDED ON 11-3-81)
- EQUIPOTENTIAL LINE (CONTOUR OF EQUAL HYDRAULIC HEAD, DASHED WHERE APPROXIMATE)
- FLOW LINE (INDICATES DIRECTION OF GROUND WATER FLOW)

DRAWING REFERENCE:

TITLED: PLOT PLAN
FOR: HENKEL CORPORATION
MINNEAPOLIS, MINNESOTA
BY: HENKEL CORPORATION
KANKAKEE, ILLINOIS
DRAWING NO.: PL-1263-2
DATE: 8-14-81 (REV. 1)

POTENTIOMETRIC SURFACE MAP
HENKEL CORPORATION
KANKAKEE PLANT

Dames & Moore

12637-001-07



Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

REFERENCE NUMBER 3

217/782-2445

Refer to: 09105507 -- Kankakee County
Kankakee/Henkel Corp.

November 15, 1982

Frank H. Beberdick
Senior Utilities Engineer
Henkel Corporation
South Kensington Rd.
Kankakee, IL 60901

Dear Mr. Beberdick:

This is in response to your letter of October 29, 1982 sent to Mr. Bharat Mathur of the Division of Air Pollution Control that was forwarded to this Division for reply. A state permit is needed if hazardous wastes generated are stored on site over 90 days. We cannot consider the data submitted to be an application as specific additional information and the required notice documents were not included.

Application forms and other information regarding permits are attached for your information and use in resubmitting.

You also asked for our comments on the data sent in advance of an anticipated Part B permit call-in under RCRA by USEPA. The technical data submitted is consistent with established RCRA standards. Your attention is directed to those portions of 40 CFR 264 that relate to General Facility Standards, Preparedness and Prevention, Contingency and Emergency Procedures, Closure and Post Closure, Financial Requirements, Management of Tanks and Containers, and to the Interim Status Standards as described in the various sub-parts of 40 CFR 265.

You may also find the "Guide for Preparing RCRA Permit Applications" that is available from Region V, USEPA in Chicago to be helpful to you in preparation of your Part B Permit Application.

Sincerely,

A handwritten signature in cursive script that reads "Eugene P. Theios".

Eugene P. Theios, Manager
Disposal Alternatives Unit
Permit Section
Division of Land Pollution Control

EPT:mks:1/31

Attachments

cc: Region
DAPC
File



Henkel Corporation

South Kensington Road
Mankakee, IL 60901
315-932-6751

October 29, 1982

Mr. Bharat Mathur, P.E.
Manager, Permit Section
Division of Air Pollution Control
Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

RECEIVED

NOV 01 1982

Dear Mr. Mathur:

Re: 1) USEPA I.D. #ILD005215769
2) Illinois I.D. #09105507

EPA - OAPC - SPFLD

Enclosed are prints of our proposed hazardous/special waste storage area for containerized wastes. Would you please review these prints in advance of the Part B permit call-in and determine if it will satisfy the various RCRA requirements? We would appreciate your comments as soon as possible because we would like to have this facility started and completed before the cold weather season.

It is our intent to store special wastes on the aggregate surface course and the hazardous wastes on the concrete pad.

FACILITY DRAWING OF CONTAINER STORAGE AREA

See facility drawing sheet 1 and sheet 2. Sheet 2 indicates the location of the containers on the concrete pad, separation and aisle spacing. While like wastes will be stored together, we do not consider this a safety or environmental problem. The reason for this is that there is not a reactive or ignitable incompatibility problem. See Table I for a list of the wastes to be stored.

CONTAINMENT SYSTEM CAPACITY

The capacity of the containment system is 3,890 gallons. See the sectional detail on the facility drawing (sheet 1) of the container storage area.

MANAGEMENT

The maximum number of containers in the storage area is 576. These will be 55 gallon capacity drums. The containers will be stacked 3 high.

CONTROL OF RUN-ON

The concrete pad elevation is higher than the surrounding ground level. Run-on is therefore controlled.

CONTAINMENT SYSTEM DRAINAGE

Any spill or precipitation will drain to the sump. See sectional detail on the facility drawing (sheet 1) for the slope of the storage areas.

REMOVAL OF LIQUIDS FROM COLLECTION SYSTEM

Spills and accumulated precipitation will drain to the sump. Spills or leakage will be analyzed and if found to be compatible with the plant pretreatment system, an 8" gate valve from the sump will be opened and the spill diverted to this pretreatment system. If a spill is found not to be compatible with the pretreatment system, it will be pumped to drums using a portable pump.

REQUIREMENT FOR BASE TO CONTAIN LIQUIDS

The concrete pad will be poured so that it is free from cracks or gaps. It will be sufficiently impervious to contain leaks, spills and accumulated precipitation until it is detected and removed. None of our waste material is sufficiently acid or caustic to cause rapid deterioration of the proposed 9" thick base. Any deterioration over a long period of time would be readily apparent and would be repaired.

SECURITY OF STORAGE AREA

The storage area is to be enclosed with a 6' high - 9 gage wire chain link fence with locked access gate. Inspection of the area is to be on a 24-hour 7 day/week basis by pretreatment plant operator who is located in an adjacent building.

Sincerely yours,



Frank H. Beberdick
Senior Utilities Engineer

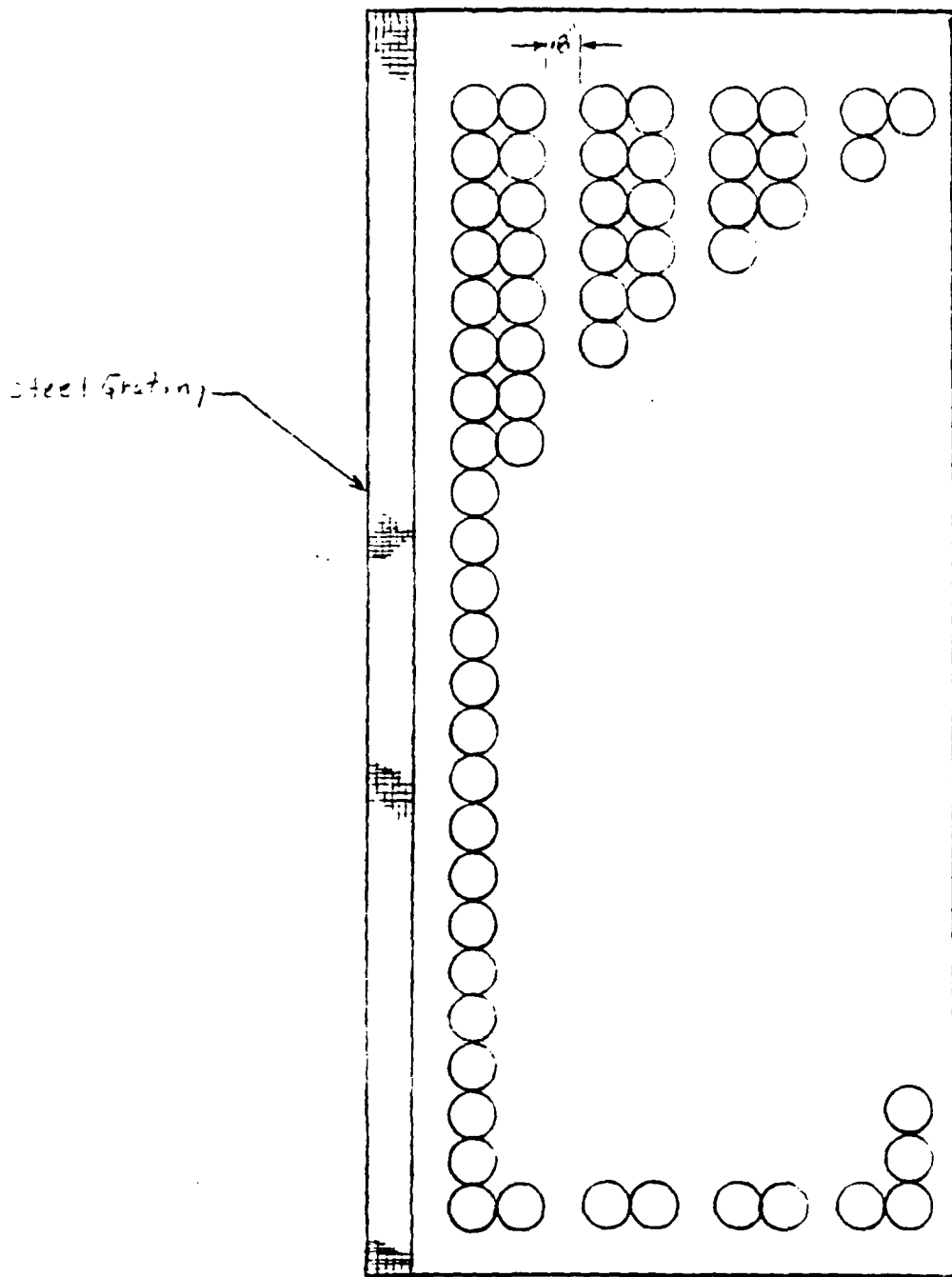
FHB/ss

- Enclosures:
- 1) Plot Plan, Dwg. No. PL-1263-1
 - 2) Henkel - West Area, Hazardous Waste Storage & Spill
Containment Sheet No. 1
 - 3) Sketch of Hazardous Storage Pad Drum Arrangement, Sheet No. 2

TABLE I

HAZARDOUS WASTES TO BE STORED

<u>WASTE</u>	<u>STATE</u>
1. Quality Control Samples, proprionicacid, misc. solvents, resins, etc.	Solid
2. Acidic Nitrobenzene	Liquid
3. Acrylonitrile/Carbon - filters	Solid
4. Starch Gel/Methanol	Solid
5. Ethylene dichloride/Sterols/Vitamin E	Solid
6. Methylene Chloride	Liquid
7. Acrylic Resin/Xylene	Solid
8. Solvent/Resins	Solid
9. Vitamin E/Acetone/Clay	Solid
10. Chloroform/Carbon - filters	Solid
11. Misc. Solvents - Isopropanol, Toluene, Xylol, etc.	Liquid



24 X 8 ROWS X 3 HIGH = 576 DRUMS
 ASSUME AVERAGE DRUM = 53 GALLONS
 TOTAL CAPACITY = 30,528 GALLONS
 SCALE: 1/8" = 1.0'

LPC REFERENCE SHEET (SAME FACILITY)

Facility Number: 0010550007 County: Kankakee

Facility Name: Heinkel Corporation

USEPA Number: ILDO05215769

File Category: State Permits

FOR ADDITIONAL INFORMATION SEE FILE CATEGORY: map/plan sheet

Date

Brief Description of Documents

10/29/82

Plot Plan - Drawing No. PL-1263-1

10/29/82

Haz. Waste Storage & Spill Containment Plan 5/21



RECEIVED

MEMORANDUM

REFERENCE NUMBER —

DATE: May 9, 1983

MAY 12 1983

TO: Division File

E.P.A. — D.L.P.C.
STATE OF ILLINOIS

FROM: Craig J. Liska

SUBJECT: 09105507 - Kankakee County - Kankakee/Henkel Corporation
Subpart "F" Inspection

This memo is written in conjunction with the Subpart "F" inspection conducted at the subject site on March 24, 1983.

Henkel Corp. is a manufacturer and distributor of specialty organic chemicals. The facility operates a waste water treatment system which includes two surface impoundments. Frank Beberdick was contacted at the time of this inspection. The facility's Part "A" application lists over 30 hazardous wastes that are introduced into the treatment system. Mr. Beberdick explained that those wastes were listed as a precautionary measure in the case of a spill or accident. He stated that under normal operation, oils and grease, soap cleaner and sewage would enter the treatment system. He also stated that all of the floor drains are connected to the system, however, no hazardous wastes are introduced under normal conditions. Mr. Beberdick stated that the corporate office is currently attempting to have the waste water in the impoundments delisted based on analysis. I informed Mr. Beberdick that Subpart "F" is applicable in this case until the waste is actually delisted, if in fact it does get delisted.

Dames and Moore conducted the hydrogeologic study and installed seven monitoring wells on-site. The hydrogeologic study, along with written sampling procedures, analytical procedures, test results, well construction details, etc. were fairly extensive. The only items missing were an evaluation of ground-water surface elevations and a regional hydrogeologic map. Mr. Beberdick was working on the evaluation of the ground-water surface elevations while I reviewed most of the records at the facility.

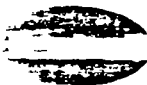
Boring logs indicate materials near the ground surface as fill (silty clay with some coarse gravel, sand and slag) followed by silty clay to a depth of 15 to 20 feet followed by the bedrock aquifer, in this case fractured Silurian Dolomite. The 15' well screens (one well B-7 has 10' screen) extend approximately four feet into the dolomite. The regional ground-water flow direction is to the north-northeast. Dames and Moore calculated the hydraulic gradient to be .0002. Dames and Moore potentiometric surface map shows a mound in the ground-water surface around the perimeter of the impoundments. Steve Martin of Dames and Moore stated that he has encountered this mounding affect at several other facilities

with surface impoundments. Steve stated that due to the low hydraulic gradient and the mounding affect he had a difficult time determining the ground-water flow direction. He stated that he utilized his information along with regional maps and other information from the State Geological Survey and is convinced that the ground-water flow is toward the north-northeast.

The one discrepancy I noticed was in regards to the water elevations. Dames and Moore's report shows the water elevation in the downgradient well (B-5) 0.07 feet higher than the upgradient well (B-7). The measurements I obtained during the inspection revealed that the water elevation in B-7 was 0.2 feet lower than in B-3 and 0.4 feet lower than in B-4. While reviewing Henkel's quarterly sampling reports I observed that although the elevations were extremely close, B-7 always had the highest elevation. I realize that both Dames and Moore and my results indicate that it is possible that B-7 is not the upgradient well, however, the mounding affect must be considered. Dames and Moore appear confident that the ground-water flow is towards the north-northeast and I tend to agree with their study, however, their data would be more convincing if one or two additional wells were constructed further north of the impoundments where the ground-water mounding would not affect the water elevations. I do not believe that it is imperative that additional wells be installed immediately, especially when the company is attempting to have the waste delisted. I would suggest that both the facility and the Agency keep a careful watch on any discrepancies in ground-water elevations.

CJL:pgb

cc: Mark Haney
Northern Region
Craig J. Liska



Henkel Corporation

South Kensington Road
Waukegan, IL 60090
315 932-6751

September 16, 1983

REFERENCE NUMBER **5**

RECEIVED

SEP 19 1983

ILL. E.P.A. - D.E.P.C.
STATE OF ILLINOIS

Mr. James K. Wiggins
Illinois Environmental Protection Agency
Environmental Protection Specialist
Field Operations Section
Division of Land Pollution Control
1701 South First Avenue
Maywood, Illinois 60153

RE: I. D. #ILD005215769

Dear Mr. Wiggins:

Enclosed is a copy of our revised Spill Prevention Control and
Countermeasure Plan.

Yours truly,

HENKEL CORPORATION

Frank H. Beberdick
Senior Utilities Engineer

FHB/mf
Enc:

RECEIVED

SEP 22 1983

ILL. E.P.A. - D.E.P.C.
STATE OF ILLINOIS

LEGEND

- XX - Hazardous Waste Storage Area
- 3 - Laboratory
- 51 - Polyamide Resin Production
- 68 - Vitamin E Production
- 71 - Acrylic Resin Production
- 77 - Nickel Catalyst
- 80 - Semi-Works

I. NAME OF FACILITY

Henkel Corporation
South Kensington Road
P.O. Box 191
Kankakee, Illinois 60901

II. TYPE OF FACILITY

The Henkel Corporation Kankakee Plant is a manufacturer and distributor of speciality chemicals. The chemicals are produced from naturally occurring raw materials and are used in a wide variety of industries.

The Kankakee Plant produces mainly four major types of products, Polyamide Resins, Mineral Chemicals, Fatty Nitrogens and Fine Chemicals.

The first of these groups, Polyamide Resins, are produced by combining a Dimer or Monomer Fatty Acid with either a Functional or Polyfunctional Amine to form an Amide. The polyamide products manufactured at Kankakee are used in the ink, coatings, paints and adhesives industries.

The Fatty Nitrogens are produced either from nitriles or primary amines. The different products in this group are used in cosmetics, as corrosion inhibitors, in oil well drilling and many other applications. The bulk of these products are liquid and are shipped either in drums or tanktrucks.

The Mineral Chemicals are normally amines produced from fatty alcohols. These products are used primarily by food and mining industries for the purpose of extraction. All of these products are liquid and as such are shipped in drums and tanktrucks.

The final group of products is fine chemicals. There are two main products out of this group, Vitamin E and sterols. Vitamin E and sterols are co-products produced from waste distillate from the vegetable oil industry.

The plant utilizes approximately 50 acres out of 200 acres that is owned by Henkel. The remaining 150 acres are leased for farm land.

III. DATE OF INITIAL OPERATION

This plant began operations on October 1, 1948 as General Mills Chemicals. On September 1, 1977, the plant was purchased by Henkel Corporation.

IV. LOCATION

The plant is located in the southwest part of Kankakee, Illinois, which is in the northeast part of the State.

V. OWNER

HENKEL CORPORATION
4620 West 77th Street
Minneapolis, Minnesota 55435

612/830-7831

VI. DESIGNATED EMERGENCY COORDINATORS

Gregory L. Rister
2 Briarcliff Court
Bourbonnais, Illinois 60914

Home Phone: 815/937-9343
Office Phone: 815/932-6751

VII. SPILL HISTORY

This plant has had no spills in the last 12 months.

VIII. SECONDARY CONTAINMENT PROVISIONS

Areas where oil, hazardous substances, or hazardous waste are stored or used, and the associated containment systems are as follows:

A. Sewer Systems

In the Kankakee Plant there are three sewer systems. These are the process sewer system, the sanitary sewer system, and the storm sewer system. All of these systems run through various parts of the plant.

The process sewer system is designed to carry drainage from the areas where chemicals are stored, used, and manufactured to the waste treatment facility.

The sanitary system runs from all buildings which have toilet facilities. This system also runs to the waste treatment facilities.

The storm sewers are designed to carry runoff from any rainstorms. This system runs to a series of settling ponds before it is pumped off to the city sewer system. If by any chance anything gets in this system, it is monitored by operators periodically as we have 24 hour coverage of this area, the fluid can be rerouted through the waste treatment facilities.

As the plant is being detailed a note will be made for each area as to which sewer systems are in each area.

B. Hazardous Waste Handling System

The Kankakee Plant has one type of waste handling system. This is a waste storage facility that stores hazardous wastes from various production areas, from the electric shop and from the quality control laboratory.

C. Description of Areas

1. Area No. 3 - Q.C. Labs

In this area, the testing of products and raw materials is handled. Many solvents, reagents, and analytical chemicals are used for these tests. All wastes are drummed and sent to the hazardous waste storage area.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

2. Area No. 11 - Raw Material Tank Farm

This is a storage area for fuel oil, waste oil, and raw material feed for the Vitamin E process. There are no dikes, but there is ample sewer capacity to handle any spill. All drainage is to the process sewer system. There are 33 tanks in the area with capacities ranging from 7,500 gal. to 84,000 gal. All piping is outside between tanks and to various pumps for transfer of material to the area where it is used. Materials handled are the same as those stored.

3. Area No. 12 - Unloading for Area No. 11

This is the unloading area for Area No. 11. The materials handled are fuel oil, feed for the Vitamin E process, and a mineral acid. All drainage and spills are controlled to the process sewer system.

4. Area No. 17 - Wheeler Process

This area is for the distillation of low concentration Vitamin E to a higher concentration. The entire process is in the building with all drainage from the area to the process sewage system. The only materials handled in the process are heavy organics. There is some storage of these materials in seven tanks with capacities of 7,000 gals. to 24,000 gals.

5. Area No. 18 - Lab Storage

This area is just the storage area for all materials which are used in the lab. No appreciable amounts of any one chemical are kept on hand at any one time. The drainage from this building goes to the sanitary sewer system.

6. Area No. 19 - Polymer Plant

In this area fatty acids are dimerized. The process does involve the use of a mineral acid which is pumped into the area. There are three tanks with capacities of 1,750 gals. to 2,500 gals. These tanks hold only the fatty acid feed. The process is all inside, and all drainage is to the process sewer system.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

7. Area No. 21 - Extraction

This process takes the raw material from Area No. 23 and extracts the tocopherol, the sterols and fatty acids from the stream. The materials unloaded, handled and stored the light solvents, alkali materials, and the raw material from Area No. 23. In the tank farm there are 5 tanks with capacities of 500 gals. to 20,000 gals. The farm has a dike with a capacity of 39,700 gals. This dike is 6 in. thick concrete, and all dikes in the plant are constructed the same.

Also, the bulk storage tank for a mineral acid tank is located in this area with a capacity of 18,000 gals. and dike with a capacity of 18,300 gals. All drainage from this process and the tank farms is to the process sewer system.

8. Area No. 23 - Acid Washing

In this area the waste distillate from the vegetable oil industry is washed with a mineral acid to remove the ash before further treatment. The materials stored in the area are the distillate and the waste acid wash which is handled in the waste treatment plant. The tank capacities are 1,500 gals. to 15,000 gals. The drainage from the building is to the process and sanitary sewer system.

9. Area No. 22 - Polymer Bulk Storage

This is the tank storage area for Area No. 19. There are 12 tanks ranging from 2,250 gal. to 10,000 gal. capacities. All material is pumped over from another area. It is all fatty acid used in Area No. 19. All drainage is handled by an open trench which leads to the process sewer system.

10. Area No. 31 - Bulk Storage

This area is the tank farm for Area No. 42, which is #6 Converter. The materials which are handled are fatty acids, dimer amines, aldehydes, and ammonia. The 18 tanks range from 1,000 gals. to 25,000 gals. All piping is above ground and all drainage is to the process sewer.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

11. Area No. 33 - Esterification R1A and R1B

This is the area where liquid resins are produced. The materials used in this area are polyfunctional amines and fatty acids. The process is conducted outside. Also in this area 11 tanks are used for storage of fatty alcohols and amine products. These materials are used and produced in other units. The tanks range from 1,000 gals. to 10,000 gals. All drainage is to the process sewer system.

12. Area No. 34 - Esterification

In this area liquid and solid resins are produced. In addition to the basic raw materials, two mineral acids and one organic acid are used which are piped in from another area. The process is all inside. All drainage from the area is to the process sewer system.

13. Area No. 36 - Quaternary Amine Storage

This area is the storage area for Area No. 37. It is diked, 32,390 gal., tank farm. Five tanks are in the farm with capacities of 8,400 gals. to 15,000 gals. All drainage is to the process sewer system. The materials handled include a light solvent, an alkali, a chlorinated hydrocarbon, and feed for the process.

14. Area No. 37 - Quaternary Amines

In this area quaternary amines are formed. The materials used are a solvent, an alkali, a chlorinated alkyl, and an amine. The process is outside and inside. No materials are stored in the area, but are transferred from Areas No. 33 and 36. All drainage is to the process sewer system.

15. Areas No. 40, 58, 84 & 85 - Warehouse

In this area drummed products, liquid and dry, are stored and shipped out. In the warehouse all drainage is to the process sewers. Outside in the area are storm sewers. Also many products are pumped to the area to be drummed, if liquid, or bagged, if solid.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

16. Area No. 41 - Bulk Storage

In this area, 41 tanks with capacities of 6,000 gals. to 9,000 gals. are used to store various raw materials and products. The raw materials stored are fatty alcohols, nitriles and fatty nitrogens. The products are fatty nitrogens, amines and long chain alcohols. All of the raw materials are unloaded from rail cars. The products are loaded into rail cars or tanktrucks, with some being pumped to Area No. 40 for drumming.

17. Area No. 42 - Converter No. 6

In this area dimer acids and dimer amines are hydrogenated. A catalyst and a mineral acid are used in the process. The process is inside and all drainage is to the process sewers.

18. Area No. 44 - Converter No. 3

This process uses fatty alcohols and ammonia to form fatty amines. The materials used are pumped in from Area No. 33. The process is all outside and all drainage is to the process sewer system. The product is pumped either to Area No. 33 or No. 41 for storage and shipment.

19. Area No. 46 - Dimer Distillation

In this area dimers and dimer diamines are distilled to produce a higher quality product. There are five tanks, of 10,000 gals. each, used to store various feeds and products. The process takes place inside and outside and all drainage is to the process and sanitary sewer systems.

20. Area No. 51 - Versacure

This plant produces liquid polyamide resins and their solutions in various organic solvents. Polyamide resins are the reaction products of polymerized (dimerized) and monomeric fatty acids with alkylene polyamines. Storage tanks for the various materials used are located within a diked area. Tank capacities range from 1,000 gals. to 15,000 gals.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

21. Area No. 57 - Milvex

This area has 11 tanks -- (450 to 15,000 gals.) used for the storage of feed materials. Two of the tanks which hold polyamines are in a diked area which has a capacity of 33,400 gals. The rest of the tanks are used for storage of dimers. The dimers and polyamines are combined to form solid polyamide resins. The process is located inside of a building and all drainage is to the process sewer system.

22. Area No. 60 - Boiler House

This area is where the process steam is produced. The only materials used are fuel oil and waste oil for firing the boilers. This material is pumped over from Area No. 11. All drainage is to the process sewer system.

23. Area No. 64 and No. 98 - Waste Treatment

This is the area where wastes from the process and sanitary sewers are neutralized, skimmed, biologically treated with activated sludge and clarified before the effluent is pumped to the Kankakee sewer system. In Area 98 the system consists of two 10,000 gal. tanks, two lagoons (750,000 gals. and 3,500,000 gals. respectively) and a 230,000 gal. final clarifier. In Area 64 there is a 8,500 gal. waste oil storage tank.

24. Area No. 66 - Koch Still

In this area Vitamin E is distilled to a more concentrated product. There are 2 tanks used for storage of feed and 6 tanks which are used to store different cuts from the process. These tanks have a capacity of 500 gals. to 2,000 gals. The process is inside. All drainage from the area is to the process sewers.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

25. Area No. 68 - Vitamin E

In this area product from Area No. 69 is extracted, distilled and crystallized to make liquid and solid Vitamin E. Light solvents are used in the process. There are 10 tanks, of 1,000 gals. to 9,000 gals., in a diked tank farm of capacity 35,800 gals. These tanks all hold light hydrocarbons which are unloaded from tanktrucks directly. Also there are 27 small process tanks in the area ranging from 500 gals. to 1,000 gals. The process is all inside and all drainage is to the process sewer system. Runoff outside is to the storm sewers.

26. Area No. 69 - Methylation

This process takes the product from Area No. 17 and methylates it to form Vitamin E. In addition to the feed, light solvents, an acid and an alkali are used in the process. In the diked tank farm area (16,000 gal. capacity), 5 tanks (1,500 gals. to 10,000 gals.), hold the light solvents. Twelve tanks are used to hold intermediate steps of the process ranging from 500 gals. to 2,000 gals. The process is inside and all drainage is to the process sewer system.

27. Area No. 71 - Acrylics

In this area acrylate monomers are combined with solvents to form acrylic coating materials. In the diked area of 46,650 gals. there are nine tanks of 2,000 gal. to 10,000 gal. capacities. The light solvents stored here are what is used in the process sewer system.

28. Areas No. 73 and 74 - Storage

In Areas 73 and 74 the feed materials for Area 34 are held. Area 73 is a diked area of 19,550 gals., with four tanks which hold the polyamines which are used. Area 74 has one tank that is diked, 19,550 gals. which has one tank of 4,000 gals. of a mineral acid. It also has seven tanks which hold the dimer amines needed. These tanks have capacities of 3,000 gals. to 10,000 gals. All drainage is to the process sewer system.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

29. Area No. 76 - Converter No. 5

In this area dimer amines are produced from fatty acids, dimer nitrile, and ammonia. Also surfactants are produced from amines, and acrylate, and an alkali. There are 9 tanks which have capacities of 1,500 gals. to 10,000 gals. These store amines and feed products. Also there is one tank (8,500 gals) of an acrylate in a diked area of 11,100 gals. The process is inside and all drainage is to the process sewers.

30. Area No. 77 - Catalyst

In this area a metal alloy is treated with an alkali solution to form a catalyst. The alloy is brought in solid form and in drums. The alkali is pumped in from another area. The process is inside and all drainage is to the process sewer. The product is drummed in the area.

31. Area No. 80 - Semi-Works

This area contains pilot plant facilities for the plant. Many different processes are performed here, they are the same as different areas of the plant. It is totally enclosed and all drainage is to the process sewer system. Materials used are normally brought into the area in drums.

32. Area No. 82/76 - LIX

In this area dodecylphenol is reacted with para-formaldehyde to make an aldehyde which is then reacted with hydrocylamine-sulfate to form an oxime which is blended with kerosene and packaged. Two solvents (toluene and hexane) are used. Solvents and intermediate solutions are stored in tanks of 2,000 gals. to 10,000 gal. capacities in a diked tank farm. All of the process steps operate in closed systems.

33. Areas No. 86 and 87 - Storage

These areas are warehouses where drums of materials used in various products are stored. Also some products are stored here. All drains are to the process sewers.

VIII. SECONDARY CONTAINMENT PROVISIONS (continued)

D. Personnel Training

1. Each employee is given on-the-job training ranging from two to four weeks before he is allowed to work any job in the plant.
2. Monthly safety meetings are held with all employees to cover various safety items including the handling of hazardous materials.
3. Employees who unload tank wagons are instructed in spill prevention and spill cleanup measures.
4. Employees handling hazardous wastes are instructed in spill reporting requirements.

E. Evacuation Plan

1. The plant is equipped with both area alarms and a general plant alarm. These alarms are used to notify plant personnel and rescue crews of fires, injuries, spills, bad weather and evacuation conditions.
2. All employees are aware of the two alarm systems and they have been instructed on what action to take when an alarm sounds.
3. All building exits are clearly marked.

IX. STORAGE SUMMARY

<u>Material</u>	<u>Amount (gal.)</u>
Fuel	526,500
Organic Solvents	307,060
Raw Material/Product	3,335,255

X. SPILL COUNTERMEASURE PROCEDURES

Although preventative systems are in operation, this plan is supplemented with the following strong spill contingency plan. The objective of this plan is threefold:

- Prevent hazardous releases and spills from occurring or reaching navigable waters.
- Minimize the extent of harm or damage resulting from the spill or release.
- Properly clean-up residues or contaminated materials resulting from the spill or release.

Discovery and Notification

- a. Anyone discovering a spill which could reach navigable waters or discovering an imminent or actual emergency situation which could threaten human health or the environment will immediately notify the Emergency Coordinator. The Emergency Coordinator will be in charge of containment and countermeasures.
- b. The following information must be given to the Emergency Coordinator:
 1. Location of spill.
 2. Material spilled and amount.
 3. Cause of spill.
 4. Measures being taken to contain or control spill.
 5. Is the spill continuing?
 6. Is the imminent danger to personnel or non-company owned property?

The Emergency Coordinator should contact plant management and Corporate Regulatory Affairs.

K. SPILL COUNTERMEASURE PROCEDURES (continued)

Discovery and Notification (continued)

- c. Based on the above information, the Emergency Coordinator may, if considered necessary, activate internal alarm systems to notify employees. Upon identification of the hazards or extent of the spill, the Emergency Coordinator should notify any of the following outside agencies if their help is needed:

	<u>Phone No.</u>
1. U.S. Environmental Protection Agency Regional Office	312/353-1346
2. U.S. Coast Guard	1-800/424-8802
3. Illinois Environmental Protection Agency	217/782-0610
4. Illinois Environmental Protection Agency	217/782-2113
5. Department of Water Pollution Control, Kankakee	815/933-0446
6. Kankakee Fire Department	815/933-0450
7. Kankakee Police Department	815/933-0400

The Emergency Coordinator must determine the extent of possible hazards to human health or the environment outside of the plant area. If such hazards exist, evacuation of local areas may be needed and reports to Governmental emergency centers may be required.

Containment and Countermeasures

The person who discovers the spill or hazardous release should take whatever immediate action is necessary to control or contain the spill or release. Examples are closing a valve, switching off a pump or applying absorbent material. Any contaminated soil, water or other material resulting from the incident must be properly treated, stored or disposed.

X. SPILL COUNTERMEASURE PROCEDURES (continued)

Cleanup and Disposal

Cleanup of the spill or hazardous release should start as soon as possible after it has been contained and is safe to handle.

- a. Large non-flammable spills should be pumped to spare empty tanks, tankwagons, or drums. Cleanup of residual film with absorbent material.
- b. Large flammable spills should be pumped to tankwagons or drums and residues properly contained.
- c. Licensed waste haulers should be contacted for disposal of liquid and absorbent wastes. Manifest requirements must be met for shipments of hazardous spill residues.
- d. All equipment, pipes, storage areas must be checked for proper operation and compliance with environmental and safety regulations prior to resuming normal operation.

KI. SPILL EVENT REPORTS

a. Oil Spills

The Federal Regulations require a facility which discharges into navigable waters more than 1,000 gallons of oil in a single event or harmful quantities of oil in two events in a 12 month period to file a spill event report with the EPA Regional Administrator and the State Water Pollution Control Agency within 60 days, giving the following information:

1. Name of the facility.
2. Name of the owner.
3. Location of the facility.
4. Date and year of initial facility operation.
5. Maximum storage or handling capacity of the facility and normal daily throughput.
6. Description of the facility including maps, flow diagrams, and topographical maps.
7. A complete copy of the SPCC Plan with any amendments.
8. The cause(s) of such spill including a failure analysis of system or subsystem in which the failure occurred.
9. The corrective action and/or countermeasure taken, including an adequate description of equipment repairs and/or replacement.
10. Additional preventive measures taken or contemplated to minimize the possibility of recurrence.
11. Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

NI. SPILL EVENT REPORTS (continued)

b. Hazardous Waste Spills or Releases

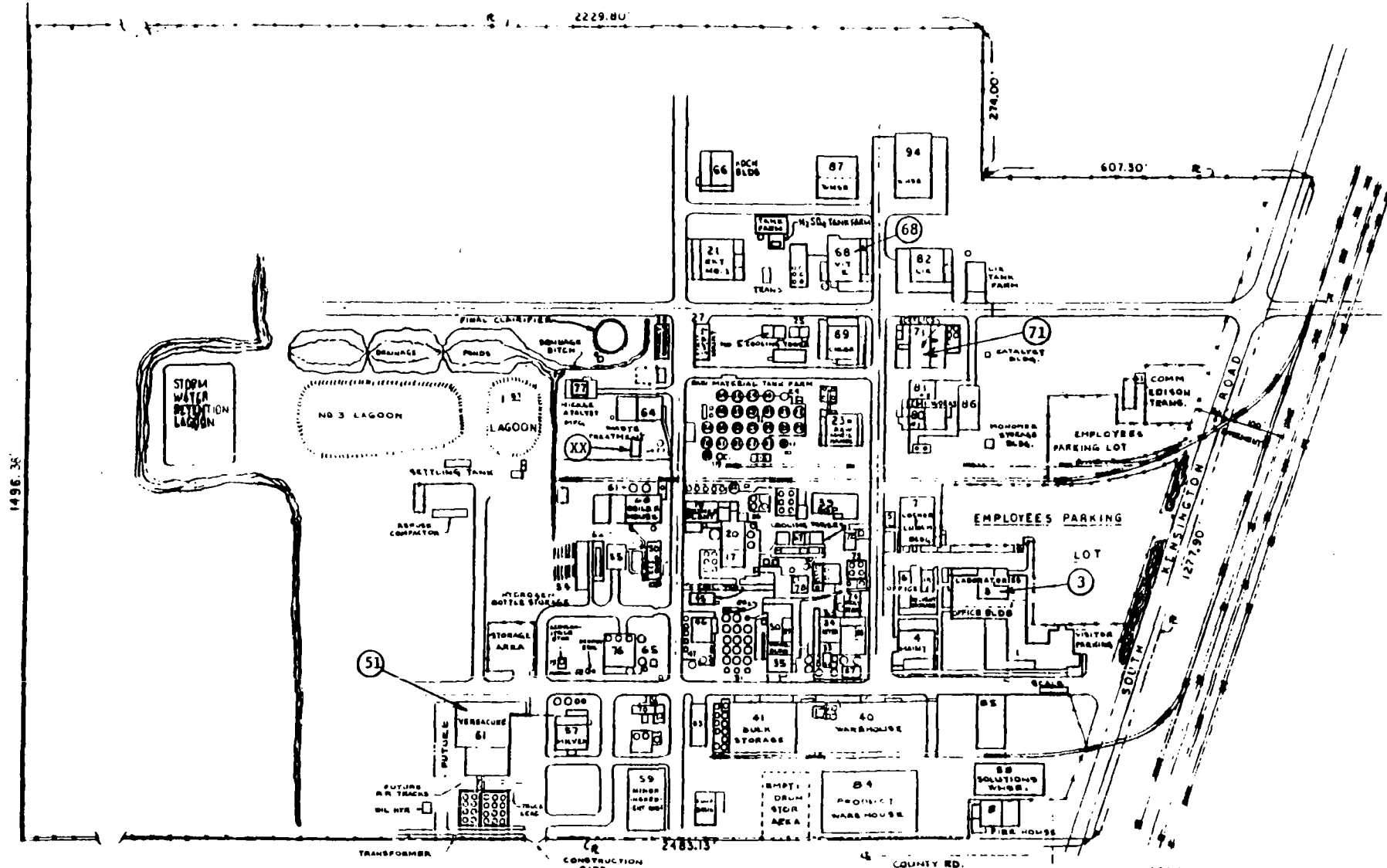
Federal Regulations require that when a facility which has a release, fire or explosion, resulting from treating, storing or disposing of hazardous waste, which could threaten human health or the environment outside the facility, the Emergency Coordinator must:

- if evacuation of local areas may be advisable, immediately notify appropriate local authorities.
- report the incident to the U.S. Coast Guard National Response Center (1-800-424-8802) giving the following information:
 - name and phone of the reporter
 - name and address of facility
 - time and type of incident (e.g. release, fire, explosion)
 - name and quantities of materials involved, if known
 - extent of injuries, if any
 - possible hazards to human health or environment outside the facility, if known.
- notify the U.S. EPA Regional Administrator and appropriate state or local authorities that no incompatible wastes will be treated, stored, or disposed with the released material until cleanup is completed and that emergency equipment is clean and fit-for-use. This notice must be given prior to commencing normal operations.
- record in the operating record the time, date and details of the incident.
- within 15 days, submit a written report to the U.S. EPA Regional Administrator, including:
 - name, address, phone of owner or operator
 - name, address, phone of facility
 - date, time and type of incident (e.g., fire, explosion)
 - types and amounts of materials involved
 - extent of injuries, if any
 - assessment of actual and potential hazards to human health or environment, if known
 - amount and disposition of recovered materials.

XI. SPILL EVENT REPORTS (continued)

c. Spills of Hazardous Substances

Federal Regulations require the reporting of spills of hazardous substances into navigable waters if quantities equal to or exceeding the reportable quantity are released in any 24 hour period. Such notice should be given by phoning the U.S. Coast Guard National Response Center (1-800-424-3302).



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6 - TO BE INSTALLED BY 1981

MAR 07 1983

DRAWN BY R.L.S. DATE 1-3-83 CHECKED BY DATE APP BY DATE		HENKEL Henkel Corporation MINNEAPOLIS MINNESOTA PROJECT NO. ESB1263	
TITLE PLOT PLAN		DRAWING NO. PL-1263-2	
SCALE 1"=100'-0" PROJECT NO. ESB1263		DRAWING NO. PL-1263-2	
REV.	DATE	DESCRIPTION	
1		TRACING BROUGHT UP TO DATE	

SPCC PLAN

Contacts

<u>Person/Agency</u>	<u>Phone</u>
-- Kankakee Fire Department	815/933-0495
-- Kankakee Police Department	815/933-3321
-- St. Mary's Hospital 500 W. Court Street Kankakee, Illinois 60901	815/937-2100
-- Corporate Regulatory Affairs Dennis J. Vaughn Henkel Technical Center 2010 E. Hennepin Minneapolis, Minnesota 55413	612/378-8662

SPCC PLAN

Contacts

<u>Person/Agency</u>	<u>Phone</u>
-- Plant:	
Henkel Corporation South Kensington Road P.O. Box 191 Kankakee, Illinois 60901	815/932-6751
-- Plant Manager:	
A. J. Pranica	815/932-6751 815/939-0198 (Home)
-- Emergency Coordinator:	
Gregory L. Rister	815/932-6751 815/937-9343 (Home)
-- U.S. Environmental Protection Agency Region V 230 S. Dearborn St. Chicago, Illinois 60604	312/353-1346
-- Illinois Environmental Protection Agency Air Pollution Control 2200 Churchill Road Springfield, Illinois 62706	217/782-2113
-- Illinois Environmental Protection Agency Water Pollution Control 2200 Churchill Road Springfield, Illinois 62706	217/782-0610
-- Department of Water Pollution Control 385 E. Oak St. Kankakee, Illinois 60901	815/933-0446
-- Kankakee Emergency (Hazardous/Toxic) Response Team	815/933-0446
-- U.S. Coast Guard	1-800/424-8802
-- Chemical Transportation and Emergency Center (CHEMTREC) Washington, D.C.	1-800/424-9300

SPILL PREVENTION CONTROL

AND

COUNTERMEASURE PLAN

FOR

HENKEL CORPORATION


South Kensington Road

Kankakee, Illinois 60901

CERTIFICATION

I hereby certify that I have examined this facility, and being familiar with the provisions of 40 CFR, Part 112 and 40 CFR, Parts 264 and 265, attest that this Spill Prevention Control and Countermeasure Plan has been prepared in accordance with good engineering practices.

Dennis J. Vaughn
Printed Name of Professional Engineer


Signature of Registered Professional Engineer

Date: April 20, 1983 Registration No. 7319 State: Iowa

Henkel

*Subpart F Groundwater Monitoring
09105507/Kankakee Co.*

Henkel Corporation

2010 East Hennepin Avenue
Minneapolis, MN 55413
612/378-8800

REFERENCE NUMBER 6

March 13, 1984
Vau-20-84

Mr. John Perry
Compliance Monitoring Section
Div. of Land Pollution Control
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
2200 Churchill Road
Springfield, IL 62706

Re: Henkel Corporation
Kankakee, IL
EPA I.D.# ILD005215769

Dear Mr. Perry:

In response to your telephoned request on March 7, I am enclosing a photocopy of the letter which legal counsel for Henkel Corporation (Mr. Darrell) sent on December 27, 1982 to Scott Phillips, Esq. of your Agency.

Although that letter addressed specifically the exclusion of our wastewater treatment lagoons from the provisions of 35 Ill. Admin. Reg. Section 725.247, the technical evaluations and determinations which we reported also support Henkel's related position on the exclusion of our lagoons from the requirements of 35 Ill. Admin. Reg. Section 725.190 et seq. (See Mr. Bailey's subsequent letter on February 2, 1984 to your Agency, c/o Mr. Hane.

Henkel has closely studied (and continues to monitor) the operations of our plant, its waste generation practices, and the wastewater influent into our lagoons. The results of these studies have been carefully correlated with the definition of "hazardous waste" under 35 Ill. Admin. Reg. Section 725.190 (40 C.F.R. Section 261.3) and the waste mixtures specifically excluded from that definition. Henkel has reviewed the intent and criteria for these exclusions in their development at the federal level (see 46 FR 56582, Nov. 17, 1981), and subsequent adoption of equivalent provisions at the state level.

Our resulting determinations are that (a) the waste mixture influents into those lagoons are not "hazardous wastes" within the meaning of Section 725.190, (b) these lagoons therefore are not surface impoundments which treat, store or dispose of "hazardous wastes", and (c) accordingly, the operation of these lagoons does not subject Henkel to the requirements of Sections 725.190 et seq. (or Section 725.247).

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MAR 14 1984

E.P.A. - D.L.P.C.
STATE OF ILLINOIS

Telex 29-0228
Cable HENKEL -L

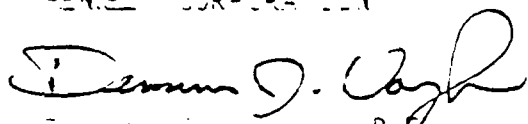
Mr. James Barry
ILLINOIS E.P.A.

Vau-20-84
3/13/84

You can be assured that, before being adopted, Henkel's conclusions in this matter have been very thoughtfully considered. Please let me know if you have any remaining questions on this subject.

Very truly yours,

HENKEL CORPORATION



James J. Vaughn, P.E.
Compliance Manager,
Environmental Safety

cc: cc

cc: T. M. Caffey, Esq., Henkel Corporation

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MAR 16 1984

E.P.A. — D.L.P.C.
STATE OF ILLINOIS



December 17, 1982

Illinois Environmental Protection Agency
Division of Land Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

Attention: Scott Phillips, Esq.
Staff Attorney, Enforcement

Re: Henkel Corporation
South Kensington Road
P.O. Box 191
Kankakee, Illinois 60901
EPA ID No. ILD0001711132

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DEC 18 1982

EPA - D.L.P.C.
STATE OF ILLINOIS

Gentlemen:

This letter is in follow-up to a telephone conversation which I had with Mr. Phillips on November 19, 1982.

At the suggestion of Mr. Phillips, a copy of this letter (with enclosures) is being sent to Mr. Rama Chaturvedi, also of your Division. A further copy of this letter (only) is being sent to Mr. Thomas Golz at the EPA/Region V offices in Chicago, in offer of information which may be useful to that federal office in its review of any similar questions which may arise concerning facilities in states (Michigan, Minnesota, and Ohio) which do not yet have Phase I or II authorities under RCRA.

Please note the "CONFIDENTIALITY" claims which this Company asserts as to one of the attachments to this letter. This assertion is made primarily to assure the physical security of the above-identified plant facility, and the Company requests that your Agency receive and hold that information in confidence. Henkel Corporation will rely upon the discretion of your Agency to appropriately limit the distribution of the other information provided in and with this letter.

- - - - -

ISSUE: Whether or not certain wastewater treatment facilities at the Henkel Corporation plant located at the above address are subject to RCRA "non-sudden" liability insurance coverages under Title 40 C.F.R. § 265.147(b) [35 Ill. Admin. Reg. § 725.247].

BACKGROUND: Confirming information previously provided by Henkel Corporation in its initial RCRA Notification of Hazardous Waste Activity (EPA Form 8700-12), the subject plant produces specialty chemical compounds including dimer acids, polyamide resins, fatty nitrogen compounds, Vitamin E, phytosterols, and starch-based polymers.

TREATMENT SYSTEM - GENERAL. Sources of the wastewater received and treated in this plant's treatment system include those from chemical processes, boiler and cooling tower blow-downs, floor washings, loading/unloading area pad spills and washings, plant sanitary waste, and some water received through road and roof drains at the plant.

Wastewaters received in the system are subjected to primary treatment (oil skimming and pH adjustment, as necessary), secondary activated sludge (aerobic) treatment in two lagoons, extended aeration, final clarification and sludge dewatering using a belt filter press. Attachment #1 is a simplified flow diagram of this activated sludge system. All fluid effluent from this treatment system is pumped to the Kankakee sewer system/POTW. No effluent from this system is discharged to surface waters, drainage ditches, or field tiles.

The volume of flow of treated wastewaters to the city is continuously recorded. Effluent sampling (BOD, suspended solids, pH, etc.) is also continuous, using flow proportional techniques. The wastewater treatment facility is manned 24 hours-a-day, 7 days-a-week.

The capacity of the waste treatment system is 1,500,000 gallons/day. However, normal flow to and through the system is about 1,000,000 gallons/day (1 MGD).

TREATMENT SYSTEM - SPECIFIC: The primary treatment entails the use of two 15,000 gallon tanks in which 75-90 percent of floating oils and greases are removed by skimming. Skimmings are heated and pumped into storage tanks for subsequent burning in natural gas-fired boilers at the plant.

The skimmed and pH-adjusted effluent then goes to surface Lagoon #1. This lagoon has a capacity of 750,000 gallons and is served by four 50 hp. floating aerators.

From Lagoon #1, gravity flow then carries wastewaters to Lagoon #3. The latter has a capacity of 3,500,000 gallons. The extended aeration in lagoon #3 is provided by eight 500 hp. floating aerators.

From Lagoon #3, the treated wastewater goes to a concrete clarifier for solids separation. Underflow solids are either sent back to Lagoon #1 to support aerobic activities there, or are sent to a belt filter press for water content reduction. Dewatered sludges are non-hazardous and are disposed of by approved land filling. Overflow fluids from the clarifier go via a lift station and force main to the Kankakee municipal sewer system/POTW.

Attachment #2 provides in diagram form an overview of the plant grounds and wastewater treatment facility.

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RCRA-REGULATED MATERIALS IN WASTEWATER: In the process wastewater which enters the treatment system at this plant are small quantities of acetone and methanol. Other RCRA-regulatable waste substances occur in influent wastewaters, if at all, only at de minimus levels. Analytical testing conducted on influent wastewaters earlier this month, under atomic absorption methods failed, for example, to detect any heavy metals.

Both acetone and methanol occur in influent wastewater, after partial recoveries, as spent processing solvents. According to Company analytical records and solvent recovery data, acetone makes up approximately 38 gallons-per-day of total influent, while methanol enters the system at the rate of about 60 gallons-per-day. Recalling that the normal flow to the system is around 1 MGD, the typical combined average contributions of waste acetone and methanol thus represent approximately 98 ppm of total daily influent.

Attachment #2 (further discussed below) reports the findings of wastewater samples analyses conducted for Henkel Corporation by an Illinois testing laboratory in December 1982. Those results do show some deviation from the combined influent norm of approximately 98 ppm, attributed to "batch" discharges. The influent flows of acetone and methanol to the system are not equalized and, as indicated by these recent analyses, periodic peaking does occur, corresponding with production activities at the plant. However, as also indicated by Attachment #3, by the solvent recovery records and by the general experience of Henkel Corporation, the periodic higher concentrations of these two water-miscible solvents do not, and have not been known to closely approach those levels at which the combined wastewaters in this treatment system may pose a realistic prospect of ignitability per RCRA criteria.

DISCUSSION: Federal regulations at 40 C.F.R. § 261.31 [35 Ill. R&R § 721.121] identify spent acetone and methanol as non-halogenated solvents under the Hazardous Waste No. F003. Additional references to acetone (U002) and methanol (U154) also appear in 40 C.F.R. § 261.33(f) [35 Ill. Admin. Reg. § 721.133(f)]. In both latter references, acetone and methanol are identified as hazardous only because of their "ignitable" propensities.

However, at these low ppm quantities in which these waste materials are received along with other wastewater influents into this treatment system, that ignitable propensity is not present. Attachment #3 summarizes the recent ignitability testing conducted on the composite waste samples pursuant to 40 C.F.R. § 261.21(a)(1) [35 Ill. Admin. Reg. § 721.121(a)(1)]. Even those wastewater samples which contained higher than the daily average levels of acetone and methanol would not ignite under the prescribed closed cup testing method. Indeed, if they could ignite, the waste would not comply with 40 C.F.R. § 265.229(a) [35 Ill. Admin. Reg. § 725.329(a)] which prohibits the placement

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MAR 16 1984

of ignitable wastes in surface impoundments (lagoons) unless they are rendered non-ignitable either beforehand or immediately after.

Regulations at 40 C.F.R. § 261.21(a)(1) [35 Ill. Admin. Reg. § 721.121(a)(1)] implicitly exclude from any presumption of ignitability those aqueous solutions which contain "less than 24 percent alcohol by volume". The levels of methyl alcohol (methanol) in this treatment system do not approach that indicated extreme level of concentration, i.e., the approximate equivalent of 240,000 ppm. Accordingly, the low-level presence of methanol in this wastewater would not subject the treatment system to RCRA regulation.

The levels of acetone in this system are also low. Analytical chemists with both Henkel Corporation and the Illinois testing company which made the flashpoint determinations reported on Attachment #3, estimate that acetone would have to be present at approximately one-half percent (0.5%) by volume before the composite wastewater would exhibit a flashpoint of 140°F. using the Pensky-Martens closed cup tester and prescribed ASTM test methodology; i.e., 5000 ppm. According to my information, that concentration of acetone has not been experienced in this treatment system nor is it anticipatable under plant or system operations.

In acclimated wastewater treatment systems such as that utilized at the subject plant, 90 percent biological removals of methanol have been observed. Similarly, 50 percent biological removals of acetone have been observed. Thus, the small quantities of these solvents which are not stripped by lagoon aeration are subject to substantial biological degradation and a concurrent, further reduction of the ignitable potentials of the composite wastewater in Lagoons #1 and #3.

ANALYSIS: 40 C.F.R. § 261.3 [35 Ill. Admin. Reg. § 721.103] provides the operational definition of "hazardous waste". Part 260, [Part 720], Appendix I (Overview of Subtitle C Regulations) provides the interpretative criteria for applying that definition.

In this case, because of the presence of small quantities of methanol and acetone, the wastewater influent to this facility's pretreatment system can be considered to be a "thinner [liquid] waste material". However, even though the wastewater in the treatment system is a "mixture of a solid waste and a hazardous waste that is listed in Subpart D", the "resultant mixture no longer exhibits any characteristics of hazardous waste identified in Subpart C". Accordingly, the wastewater mixture in these lagoons is not and should not be considered to be a hazardous waste for the purposes of RCRA. Section 261.3(a)(2)(iii); no directly parallel State provision, but see your Section 721.103(b)(3).

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The spent methanol and acetone wastestreams produced at the subject Henkel facility are not principal wastestreams, and the lagoons and related treatment systems are not operated in any intended, principal part to handle spent solvents of this type. For economic reasons, the Company recovers and reuses a substantial portion of these solvents, and is actively pursuing ways in which to recover more. In this meantime, however, these methanol and acetone wastestreams are reasonably and efficiently managed by being discharged into the facility's wastewater treatment system. There is no indiscriminate discharge of these substances into wastewaters, so as to jeopardize compliances with discharge requirements under the Clean Water Act.

EPA "MIXTURES" RULE: On November 17, 1981, the federal EPA issued an Interim Final Rule concerning the identification and listing of hazardous (and decidedly non-hazardous) processing waste mixtures. 46 Fed. Reg. 56582 et seq. In the preamble of that issuance, the EPA acknowledged that -

"Strict application of the mixture rule would cause to be hazardous waste a mixture of large volumes of non-hazardous wastewater and the relatively small amounts of listed hazardous wastes which are introduced into the wastewater as a result of normal manufacturing operations . . . In many cases, however, these relatively small amounts of listed hazardous wastes are likely to be greatly diluted in the wastewater, so that the resulting mixture is not hazardous . . . A presumption of hazardousness is not warranted in these situations." (Id. at Section II of preamble, pp. 56582-83).

Although that 1981 amendment to the federal mixtures rule specifically addressed (and exempted from the definition of "hazardous waste") low concentrations of spent solvents identified under the generic Hazardous Waste No's F001, F002, F004 and F005, Henkel Corporation respectfully submits that the same rationale and result (exclusion) should apply in this case to small wastewater concentrations of acetone and methanol, as listed under No. F003 in § 261.31 [35 Ill. Admin Reg. § 721.131]. To hold otherwise would produce an incongruous result in favor of "toxic" hazardous waste for which leaching from lagoons into groundwater is an appropriate concern.

Henkel Corporation notes that the State of Illinois has adopted in § 721.103(a) of its rules those Subpart C and D list-oriented criteria for determinations of "hazardous waste" which correspond with the version of federal Section 261.3 in effect before the EPA amendments on November 17, 1981. Whether the EPA's amendments in November 1981 were considered for adoption by the State but conscientiously rejected, or whether other factors precluded their implementation in Illinois, we do not know. However, unless your Agency concurs with the determinations of Henkel Corporation in this case, the "unintended result" foreseen

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by the EPA under the previous version of its § 261.3 could arise; i.e., "some waste mixtures being considered hazardous wastes which do not pose substantial hazard to human health or the new environment because they contain only very small amounts of listed hazardous chemicals". Id. at Section I of preamble, p. 56582.

CONCLUSION: For all of the foregoing reasons, Henkel Corporation respectfully submits that, because of the small influent volumes of acetone and methanol and the determined absence of a hazard of ignitability relative to the composite wastewater, neither of wastewater treatment lagoons operated at the subject plant should be considered by your agency to be a "surface impoundment . . . which is used to manage hazardous waste" (40 C.F.R. § 265.147(b)) [35 Ill. Admin. Reg. § 725.147(b)] so as to require the Company to acquire and maintain "non-sudden" liability insurance relative to this operation.

We trust that your Agency will agree with the conclusion just stated. However, in the event that you may disagree and advise us of the bases for your differing conclusion, Henkel Corporation requests a reasonable amount of time following your notice in that regard to respond or acquire such insurance.

Please direct any questions which you may have concerning this letter or its enclosures to my attention at the address above. (My direct telephone number is 612/830-7982). If you desire any additional factual information concerning the subject treatment facility or other facet of this matter, please also advise.

Very truly yours,

HENKEL CORPORATION



Thomas M. Dailey
Attorney

TMD/mn

Enclosures

Certified Mail - Return Receipt Requested

cc: J. M. Pierson, Esq. - Henkel/PP
Mr. Rama Chaturvedi - Ill./EPA
Mr. Thomas Golz - EPA/Region V

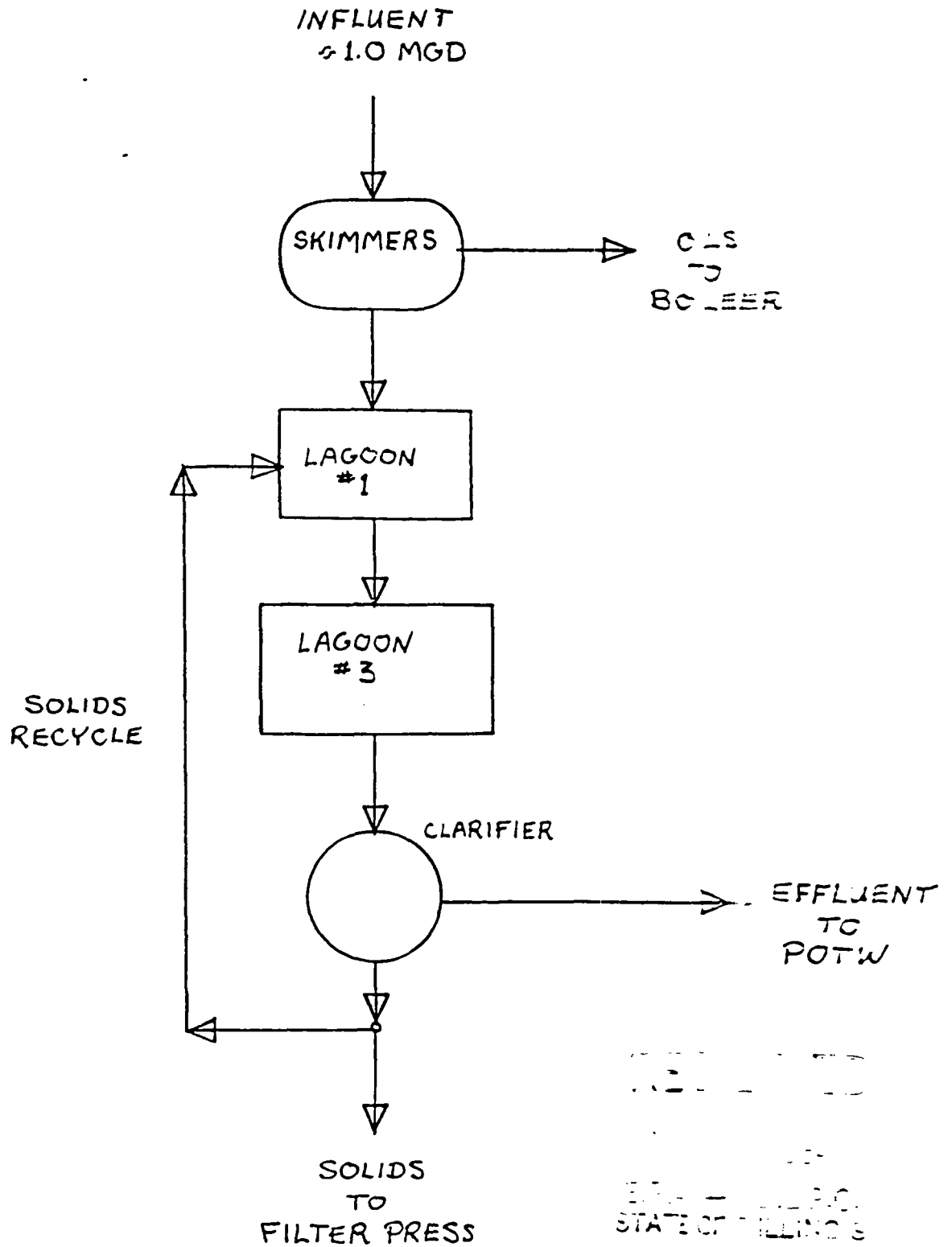
D. J. Vaughn, P.E. - Henkel (HTC) / Environmental Safety

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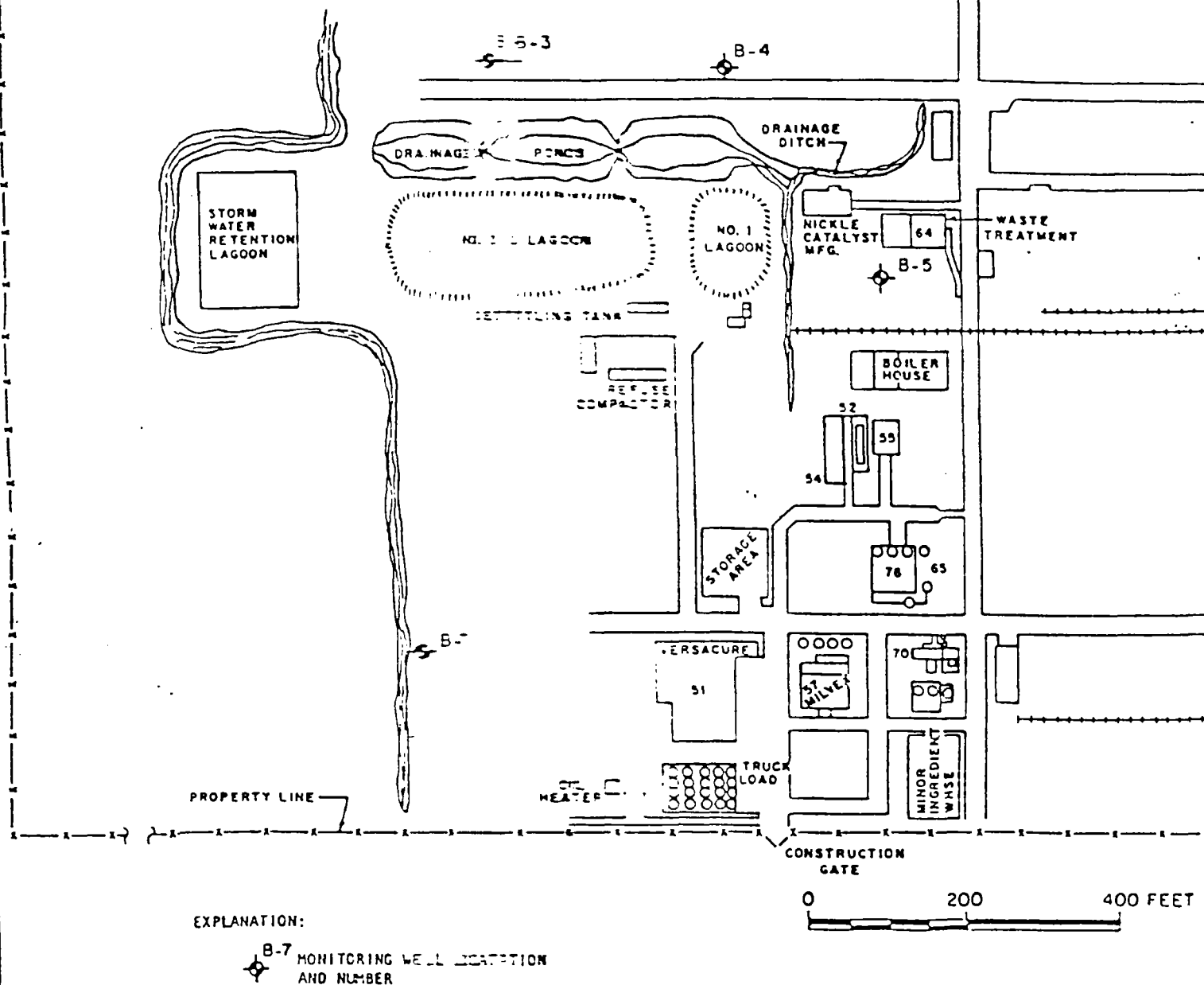
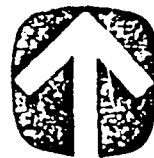
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ATTACHMENT 1
KANKAKEE WASTEWATER TREATMENT SYSTEM



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NOV 11 1982
EPA - REGION 5
STATE OF ILLINOIS

D.J.V.
11-3-82



DRAWING REFERENCE:
TITLED: PLOT PLAN
FOR: HENKEL CORPORATION
MINNEAPOLIS, MINNESOTA
BY: HENKEL CORPORATION
KANKAKEE, ILLINOIS
DRAWING NO.: PL-1263-2
DATE: 8-14-81 (REV. 1)

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JUL 14 1984
EPA - D.L.P.C.
STATE OF ILLINOIS

FIGURE 5
MONITORING WELL
LOCATION MAP

Dames & Moore

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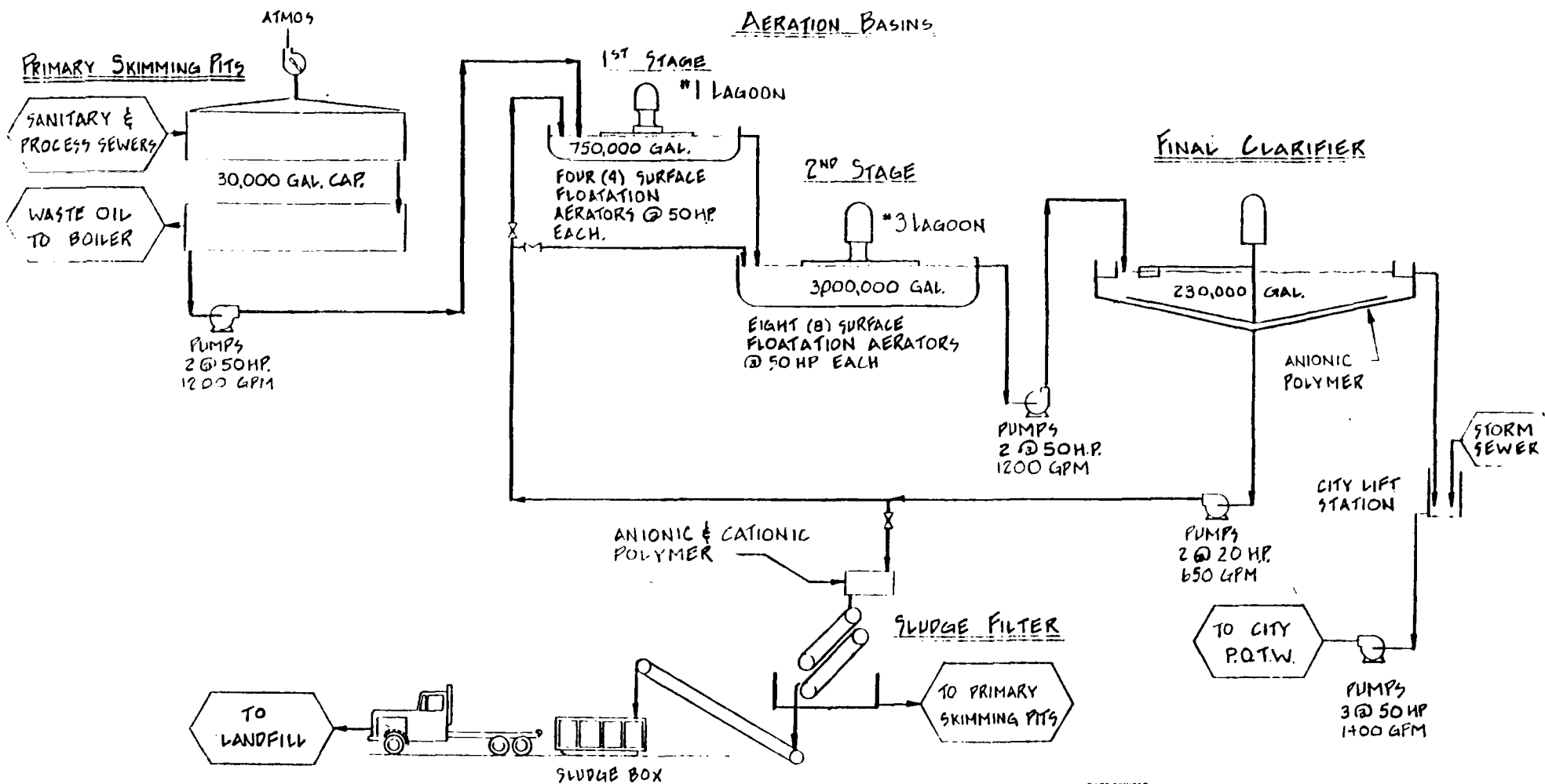
DEC 16 1982

EPA - REGION
STATE OF ILLINOISANALYSES OF PROCESS WASTEWATER

December 1982

<u>Date of Sample</u>	<u>Sample Location</u>	<u>Flashpoint* (Composite W/water)</u>	<u>Concentration Methanol</u>	<u>Concentration Acetone</u>
12/03/82	Inlet - Primary Treatment (skimmers)	Greater than 212°F.	79 mg/liter	230 mg/liter
12/03/82	Outlet - Primary Treatment (skimmers)	Greater than 212°F.	39 mg/liter	215 mg/liter
12/03/82	Inlet - Lagoon #3	Greater than 212°F.	48 mg/liter	76 mg/liter
12/15/82	Outlet - Primary Treatment (skimmers)	Greater than 212°F.	Less than 10mg/liter	61 mg/liter
12/15/82	Mid-Lagoon #1 (Dip Sample)	Greater than 212°F.	Less than 10mg/liter	45 mg/liter
12/15/82	Mid-Lagoon #3 (Dip Sample)	Greater than 212°F.	Less than 10mg/liter	50 mg/liter
12/15/82	Outlet - Treated effluent to city POTW	Greater than 212°F.	Less than 10mg/liter	53 mg/liter
Sample Averages:		Greater than 212°F.	Less than 29.5 mg/liter	104.28 mg/liter

*Pensky-Martens Closed Cup Tester; prescribed ASTM Standard Testing Method



DATE PRINTED				DRAWN BY H.M. ZELHART DATE 2/15/84		Henkel Corporation MINNEAPOLIS MINNESOTA		ENGINEERING DEPT.	
CHECKED BY				DATE		WASTE WATER PRETREATMENT		PLANT DWG. NO.	
APP BY				SCALE NONE		KANKAKEE ILLINOIS (USA)		DRAWING NO.	
BLDG NO				PROJECT NO		JOB NO		SHEET	
LOC NO 953									

REV	NO	By	DATE	DESCRIPTION
		APP		

WASTE DISPOSITION FORM

Facility Name: HENKEL CORP.EPA #: LD005215769EPA #: 0910

Waste Name (Include haz & non-haz special & waste for which no determination has been made)	Generating Process (For waste gen. on site. N/A for TSD)	Date of Last Analysis	USEPA Haz Waste #	On 8700 -12 *	On 3510 -3 *	On Annual Rpt. for			Amount on Site	Rate of Generation	Last Manifested Shipment	Disposition
						87 *	86 *	85 *				
LABORATORY WASTE	MISCELLANEOUS ANALYSES	4/22/82	D001	Y	Y	Y	Y	Y	3 drums	3 drums/mo.	2/15/88	LWD, INC. CALVERT CITY, KY. INCINERATION
ACIDIC Acetonitrile NITROBENZENE	MISCELLANEOUS ANALYSES	5/29/86	F004 D002	Y	Y	Y	Y	Y	4 drums	10 drums/yr.	11/9/87	
ACRYLIC WASTE	ACRYLIC PRODUCTION	6/28/85	D001	Y	Y	Y	Y	Y	3 drums	4 drums/mo.	2/15/88	
SOLVENTS AND RESIN WASTE	RESIN PRODUCTION	1/4/86	D001	Y	Y	Y	Y	Y	5 drums	5.5 drums/mo.	2/15/88	
WASTE SODIUM ALUMINATE	ADHESIVE PRODUCTION	6/28/85	D002	Y	Y	Y	Y	Y	1 drum	5 drums/yr.	11/2/87	
VITAMIN E WASTE	VITAMIN E PRODUCTION (METHYLATION)	1/23/86	D001	Y	Y	Y	Y	Y	11 drums	10.5 drums/mo.	2/15/88	
WASTE SOLVENT	LABORATORIES	6/28/87	F003 F005	Y	Y	Y	Y	Y	3 drums	27 drums/yr.	2/15/88	
NON-SPENT NICKEL CATALYST	REPRODUCED NICKEL CATALYST	9/2/82	D001	Y	Y	Y	Y	Y	NONE	2 drums/yr.	11/2/87	
CONCENTRATED TIN LIQUOR	VITAMIN E PRODUCTION	5/87	D002	Y	Y	Y	Y	Y	NONE	814,865 GALS/yr.	3/17/88	MTT CHEMICALS CARROLLTON, KY. MASON OR METALS SHEPHERDVILLE, TN INCINERATION

REFERENCE NUMBER



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* All responses must be explained in the narrative.

WASTE DISPOSITION FORM

Facility Name: HENKEL CORP.USEPA #: ILD005215769IEPA #: 09

Waste Name (Include haz & non-haz special & waste for which no deter- mination has been made)	Generating Process (For waste gen. on site. N/A for TSD)	Date of Last Analy- sis	USEPA Haz Waste #	On 8700 -12 *	On 3510 -3 *	On Annual Rpt. for			Amount on Site	Rate of Gener- ation	Last Mani- fested Ship- ment	Disposition
						87 *	87 *	87 *				
NON-HAZARDOUS SPECIAL WASTE												
RESIN WASTE AND VITAMIN E	VITAMIN E PRODUCTION	7/12/85	NA	NA	NA	NA	NA	NA	700 LBS	480 CU. YD. PER MO.	2/16/88	KANKAKEE LANDFILL
WASTE TREAT- MENT SLUDGE	WASTE TREATMENT SLUDGE	11/2/84	NA	NA	NA	NA	NA	NA	19,000 LBS	260 CU. YD. PER MO.	2/22/88	MILFORD WASTE SYSTEM MILFORD IL.
WASTE OIL	POLYMER PRODUCTION	5/22/85	NA	NA	NA	NA	NA	NA	31,000 GALS	31,300 GALS PER MO.	2/10/88	BRESLUBE USA, INC. EAST CHICAGO, IL.
NEUTRALIZED TIN LIQUOR THR	VITAMIN E PRODUCTION	10/23/85	NA	NA	NA	NA	NA	NA	2000 GALS	1700 GALS PER MO.	2/19/88	MILFORD LANDFILL
NATURAL BENTONITE CLAY	FILTER MATERIAL IN POLYMER PROD	12/87	NA	NA	NA	NA	NA	NA	900 LBS	25,000 CU. YD. PER MONTH	2/19/88	KANKAKEE LANDFILL

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IEPA-DLPG

* All "No" responses must be explained in the narrative.

SUMMARY

Henkel Corporation produces specialty chemical compounds including dimer acids, polyamide resins, fatty nitrogen compounds, Vitamin E, sterols and starch-based polymers. The plant is divided into a north and south end. The north end houses the production of fine chemicals including Vitamin E, sterols and food grade additives (vegetable oil derivatives). The south end is the location of production of industrial chemicals used in resins, coatings, plastics and adhesives.

HAZARDOUS WASTES GENERATED

Laboratory Waste - D001

- Generated from miscellaneous analyses
- Rate of generation: 3 drums/month
- Shipped off-site to LWD, Inc. (Calvert City, KY) for incineration
- 3 drums on site

Acidic Nitrobenzene - F004

- Generated from miscellaneous analyses
- Rate of generation: 10 drums/year
- Shipped to LWD
- 4 drums on site

Acrylic Waste - D001

- Generated from acrylic production
- Rate of generation: 4 drums/month
- Shipped to LWD
- 3 drums on site

Solvents and Resin Waste - D001

- Generated from Resin production
- Rate of generation: 5 1/2 drums/month
- Shipped to LWD
- 5 drums on site

Waste Sodium Aluminate - D002

- Generated from adhesive production
- Rate of generation: 5 drums/year
- Shipped to LWD
- 1 drum on site

Vitamin E Waste - D001

- Generated from Vitamin E production (methylation)
- Rate of generation: 10 1/2 drums/mo.
- Shipped to LWD
- 11 drums on site

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Waste Solvents - F003/F005

- Generated from laboratories (quality control analyses)
- Rate of generation: 27 drums/year
- Shipped to LWD
- 3 drums on site

Non-Spent Nickel Catalyst - D001

- Generated as reproduced nickel catalyst
- Rate of generation: 2 drums/year
- Shipped to LWD
- None on site

Concentrated Tin Liquor - D002

- Generated from Vitamin E production
- Rate of generation: 816,865 gallons/year; 68,072 gallons/month
- Shipped off-site to M&T Chemicals (Carrollton, KY) or Mason Metals (Sherrerville, In) for incineration
- None on site

NON-HAZARDOUS SPECIAL WASTES

Resin Waste and Vitamin E

- Generated from Vitamin E production
- Rate of generation: 4860 cu. yds/month
- Shipped off-site to Kankakee Landfill
- 700 lbs on site

Wastewater Treatment Sludge

- Generated from wastewater treatment plant
- Rate of generation: 260 cu. yds/month
- Shipped off-site to Milford Waste Systems (Milford, IL)
- 19,000 lbs on site

Waste Oil

- Generated from polymer production
- Rate of generation: 31,300 gallons/month
- Shipped off-site to Breslube USA, Inc. (East Chicago, IN)
- 31,000 gallons on site

Neutralized Tin Liquor Tar

- Generated from Vitamin E production
- Rate of generation: 7700 gallons/month
- Shipped off-site to Milford Landfill
- 2000 gallons on site

Natural Bentonite Clay

- Generated as filter material in polymer production
- Rate of generation: 25,000 cu. yds/month
- Shipped off-site to Kankakee Landfill
- 900 lbs on site

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ACTIVITY PROCESS UNITS

S01 - Container Storage

This facility has a container storage area located near the west side of the plant (see diagram and photos 2 & 3). The storage pad is approximately 30 feet x 100 feet. The pad slopes toward the east and a spill catch drain is located in the center east area. The storage area is not closed and no evidence of leakage or contamination was observed on the pad. There were 35 drums present.

S02 -Tank Storage

A hazardous waste tank storage area is located near the north side of the plant (see diagram and photo 1). This tank contains only Concentrated Tin Liquor (D002). The tank has a capacity of 8000 gallons, is 10 feet in diameter and is located approximately 400 yds from the property line. The diked area around the tank is in good condition and is capable of containing 100 percent of the volume of the tank. There was no waste in the tank at the time of the inspection. The tank has not been closed.

TO4 - Treatment Units

- 1) Wastewater Treatment Facility - Wastewater is not hazardous (exempt from regulation under RCRA)
- 2) Thermal Treatment Facility - Used oil is burned for fuel recovery; exempt from RCRA under Section 726.144.

APPARENT VIOLATIONS

- 722.111 - Company has improperly classified two hazardous waste streams:
Acidic Nitrobenzene - D001 (should be F004)
Waste Solvents - D001 (should be F003/F005)
- 722.142 - No exception report was filed for manifest #IL 1674168 (shipped 8/2/87 to M&T Chem. in Carrollton, KY)
- 725.115 - Inspection schedule does not address the hazardous waste storage tank.
- 725.152 - The facility's contingency plan does not contain an up-to-date list of emergency coordinators.
- 725.154 - Contingency plan was not amended when the list of emergency coordinators changed.
- 725.173 - The records and results of the hazardous waste storage tank inspections are not contained in the operating record.
- 725.295 - Inspections of the hazardous waste storage tank are not being conducted.

Appendix A
Illinois Location Map

BRIDGE FOUNDATION BORING LOG

T BRIDGE Illinois Route 115 Date 4-7-78
SBI 25 Over Gar Creek Bored By J. Legan
39C-BR STA. 317+68 Checked By W. H. Beck
 COUNTY Kankakee
 Boring No. 2 (N. Abut.)
 Station 317+12
 Offset 20' RT

Elevation	N	Qu t/s.f.	w (%)	Surface Water El.	Groundwater El. at Completion	After Hours	Elevation	N	Qu t/s.f.	w (%)
Ground Surface	99.2	0		87.1						
DK BR LOAM (ORGANIC)	96.7				Dry					
SOFT YL BR SANDY LAOM	94.7	3	0.4 S							
LOOSE TAN FINE SAND	92.2	5	0.2 S							
MEDIUM TAN SANDY LOAM	87.2	15	0.5 S							
STIFF GR SAND & GRAVEL	83.7	24	2.0 P							
HARD WHITE LIMESTONE	80.2	36	-							
		64/10"	-							
		100/3"	-							

N - Standard Penetration Test -
 Blows per foot to drive 2"
 O.D. Split Spoon Sampler 12" with
 140# hammer falling 30".

Qu - Unconfined Compressive
 Strength - t/sf
 w - Water Content - percentage
 of oven dry weight - %.

Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value
 P - Penetration

BRIDGE FOUNDATION BORING LOG

T. _____
SBI 25
39C+BR

BRIDGE Ill. Route 115
Over Gar Creek
STA. 317+68

Date 4-6-78
Bored By G. Legan
Checked By W. H. Beck

COUNTY Kankakee

Boring No. 1 (S. Abut.)
Station 318+27
Offset 44' RT

Elevation	N	Qu t/s.f.	w (%)	Surface Water El.	Elevation	N	Qu t/s.f.	w (%)
				87.1				
				Groundwater El. at Completion 89.5				
				After _____ Hours				
Ground Surface 100.5	0							
DK BR LOAM								
98.5					-25			
MEDIUM DK BR SANDY LOAM (ORGANIC)		0.7						
96.5	1	S	4					
MEDIUM LT BR SANDY LOAM	-5							
94.0	11	0.9	14					
LOOSE TAN FINE SAND		0.2			-30			
	12	S	5					
	-10							
	26	0.8	20					
88.0					-35			
DENSE W & GR SAND & L.S. PIECES	64/11"	-	4					
86.5								
STIFF GR SANDY LOAM TILL	-15							
	15	1.2	11					
83.0					-40			
HARD GR & W LIMESTONE PIECES	68	-	12					
	-20							
	100/5"	-	21					
					-45			

N - Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu - Unconfined Compressive Strength - t/sf
w - Water Content - percentage of oven dry weight - %.

Type failure:
B - Bulge Failure
S - Shear Failure
E - Estimated Value
P - Penetrometer

BRIDGE FOUNDATION BORING LOG

T. _____ BRIDGE Old U.S. 45 Over Date 6-27-80
 ROUTE S.B.I. 25 Minnie Creek-Drainage Ditch Bored By F.R. Pickard
 EC. 39 BR STA 158+24 Checked By R. Yell
 COUNTY Kankakee

Boring No. <u>2 (S. Abut.)</u>	Elevation	Z	Qu t/s.f.	(%)	Surface Water El. <u>86.8</u>	Elevation	Z	Qu t/s.f.	(%)
Station <u>157+60</u>					Groundwater El. at Completion _____				
Offset <u>36' RT</u>					After _____ Hours _____				
Ground Surface	96.6	0			HARD SILTY LOAM-LOAM TILL				
						49/			
BL. SANDY LOAM						73.1	12"		9
	94.1				DENSE GREEN LIMESTONE		50/		
						0"			
LOOSE BL. SANDY LOAM						-25			
	92.1	6	-	8					
MEDIUM LIGHT TAN FINE SAND									
		19	-	4					
						-30			
	87.1	32	-	3					
DENSE GRAY FINE SAND WITH SOME GRAVEL									
		45	-	18					
						-35			
	82.1	29	-	16					
HARD GRAY LOAM TILL SOME SILT LAYERS									
		20	5.2	18					
	79.6								
HARD SILTY LOAM-LOAM TILL						-40			
		30	4.0	7					
			P						
		43/	2.8						
		12"	S	11					
						-45			

- Standard Penetration Test -
 blows per foot to drive 2"
 D. Split Spoon Sampler 12" with
 0# hammer falling 30".

Qu - Unconfined Compressive
 Strength - t/sf
 w - Water Content - percentage
 of oven dry weight - %

Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value

BRIDGE FOUNDATION BORING LOG

CT _____ BRIDGE Old U.S. 45 Over Date 6-27-80
 ROUTE S.B.I. 25 Minnie Creek-Drainage Ditch Bored By F. R. Pickard
 SEC. 39 BR STA. 158+24 Checked By R. Yell
 COUNTY Kankakee

Boring No. 1 (N. Abut.)
 Station 158+71
 Offset 30' LT

Elevation	Z	Qu t/s.f.	w (%)	Surface Water El. <u>86.8</u>	Elevation	Z	Qu t/s.f.	w (%)
Ground Surface <u>98.7</u>	0							
BL SANDY LOAM				DENSE LOAM TILL				
<u>96.7</u>					<u>110</u>	<u>1.9</u>	<u>8</u>	<u>10</u>
LOOSE BL. SANDY LOAM					<u>-25</u>			
<u>94.2</u>	<u>6</u>	<u>-</u>	<u>7</u>		<u>50/</u>	<u>4.0+</u>		<u>6</u>
					<u>10"</u>	<u>P</u>		
LOOSE BR. FINE SAND	<u>-5</u>			<u>71.2</u>				
	<u>3</u>	<u>-</u>	<u>10</u>	DENSE GREEN GRAY LIMESTONE	<u>100/</u>	<u>6"</u>	<u>-</u>	<u>-</u>
					<u>-30</u>			
<u>89.2</u>	<u>5</u>	<u>-</u>	<u>7</u>					
MED. BR. SAND	<u>-10</u>							
<u>86.7</u>	<u>29</u>	<u>-</u>	<u>12</u>		<u>-35</u>			
DENSE GR. SAND & SOME FINE GRAVEL								
<u>82.7</u>	<u>43</u>	<u>-</u>	<u>16</u>					
					<u>-40</u>			
STIFF GR. SILTY CLAY WITH THIN SILT LAYERS	<u>-15</u>							
<u>81.7</u>	<u>13</u>	<u>-</u>	<u>25</u>					
	<u>7</u>	<u>2.0P</u>	<u>20</u>					
HARD GR. SILTY CLAY (LAKE DEPOSIT)								
<u>79.2</u>	<u>21</u>	<u>4.5</u>	<u>16</u>					
		<u>B</u>						
HARD GR. SILTY CLAY LOAM TILL	<u>-20</u>							
<u>76.7</u>	<u>33</u>	<u>4.0</u>	<u>9</u>					
		<u>P</u>			<u>-45</u>			

N - Standard Penetration Test -
 Blows per foot to drive 2"
 O.D. Split Spoon Sampler 12" with
 140# hammer falling 30".

Qu - Unconfined Compressive
 Strength - t/sf
 w - Water Content - percentage
 of oven dry weight - %.

Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value



REFERENCE NUMBER 3

Illinois Department of Transportation

Division of Highways / District 3
700 East Norris Drive / Ottawa, Illinois / 61350-0697

May 14, 1990

Mr. Tim Murpny
Illinois EPA
200 Churchill Road
Box 9276
Springfield, IL 62794-9276

Dear Mr. Murphy:

Your May 11, 1990 request for boring information in Kankakee County to Mr. Bob Pickard, of our geotechnical staff, has been researched, and we have located four sets of bridge borings in or adjacent to Section 17, 18, 19 and 20, T30N R12E. These borings should give you the geological information that you desire.

If you have any questions about the boring logs, please contact Mr. Pickard at 815-434-6131.

Sincerely,

R. H. Blasius
District Engineer

By: Edward M. Krysiak
District Materials Engineer

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IEPA/10/20

Appendix B
Site 4-Mile Radius Map

HENKEL CORPORATION

SITE LOCATION

